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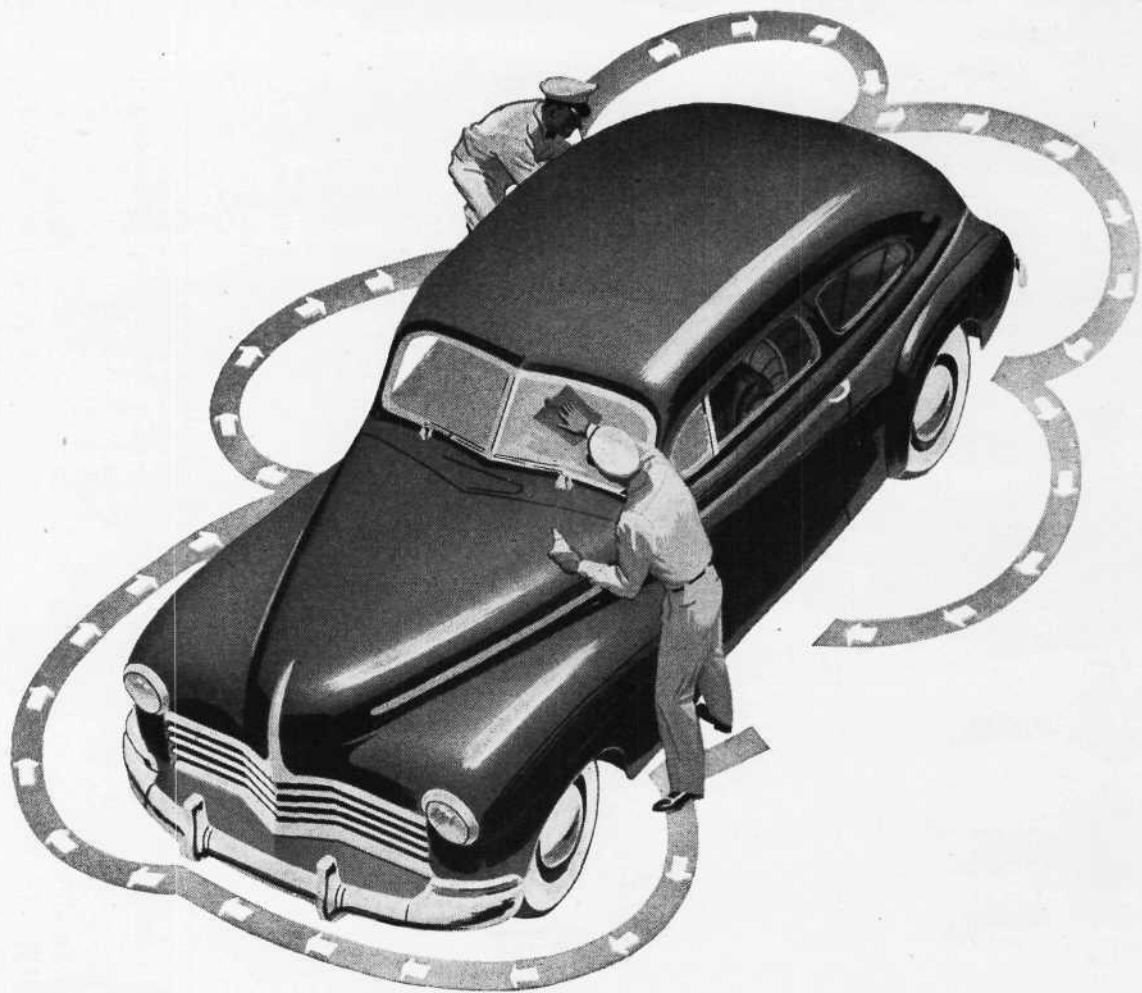
Desert

M A G A Z I N E



APRIL, 1947

25 CENTS



ring around the rosy...with a purpose!

Next time you're in a Union Oil Station, watch the procedure the Minute Man follows in serving you. He works in a circle around your car, starting with the driver's windshield and ending up at the left front window.

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DESERT CALENDAR

- March 29-30—Second annual exhibit, Imperial Valley Gem and Mineral society and Imperial Lapidary guild, Central junior college auditorium, El Centro, California.
- March 29-April 5—Sierra club Easter vacation trip to southern Arizona and Flying H ranch.
- April 1-4—Yaqui Indian ceremonials, Tucson and Phoenix, Arizona. Week's rites.
- April 2—State symphony orchestra children's concert, Tabernacle, Salt Lake City, Utah.
- April 4—Easter pageant in Box canyon, Mecca, California, at 8:30 p. m.
- April 4-5—Annual convention, Daughters of Utah Pioneers, Salt Lake City, Utah.
- April 5—Fiesta Jardinera (Gardeners' festival), Phoenix, Arizona.
- April 5-6—Fifth annual Gila River Round Up and Rodeo, Safford, Arizona.
- April 5-6—Arizona state high school championship ski meet, Snow Bowl, Flagstaff, Arizona.
- April 5-6—Sierra club, Desert Peaks section, climb of Coso and Maturango peaks, Inyo county.
- April 5-6—State Mineral Society of Texas, mineral show in Plaza hotel, San Antonio, Texas.
- April 6—Easter sunrise services, Traver-tine point, Coachella valley, California.
- April 6—Easter services, Grand Canyon Shrine of Ages, Grand Canyon, Arizona.
- April 6—Annual Easter services on mountainside, Palm Springs, California.
- April 6—Horse show, Sonoita, Arizona.
- April 7—Second annual Yuma county agricultural fair, Yuma, Arizona.
- April 7-May 7—"Message of the Ages," pageant of Church of Jesus Christ of Latter-day Saints, Tabernacle, Salt Lake City, Utah.
- April 9-13 — Desert Circus, Palm Springs, California.
- April 11-13 — World's championship rodeo, Phoenix, Arizona.
- April 12—Annual White Sands playday, given for children all over Southwest. White Sands national monument, Alamogordo, New Mexico.
- April 12-13—Indian Wells Valley Stampede and Rodeo, Ridgecrest, Mojave desert, California.
- April 12-13—Arizona state championship ski meet, Snow Bowl, Flagstaff, Arizona.
- April 12-May 4—Junior Navajo and Hopi art show, sponsored by Museum of Northern Arizona, Flagstaff, Arizona.
- April 17-18—Mesa Garden club flower show, Mesa, Arizona.
- April 18-20—Imperial Valley Roundup, Imperial fair grounds, Imperial, California.
- April 18-20—Second annual Forty-Niner's Days, Desert Hot Springs, California.
- April 19-20—Sierra club, Nature Study section overnight camping trip to Red Rock canyon, California.
- April 21-23—Women's golf tournament, Palm Springs, California.
- April 25—Annual hobby and flower show, sponsored by P.T.A. at Mecca, California, 7 p. m.



Volume 10

APRIL, 1947

Number 6

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RANDALL HENDERSON, Editor. BESS STACY, Business Manager.
LUCILE HARRIS and HAROLD O. WEIGHT, Associate Editors.

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ABANDONED

This photograph taken by Loyd Cooper of Claremont, California, was awarded first place in the Desert Magazine's February contest. The subject of this contest was "Desert Homes."



IMPREGNABLE

This photograph of a Red Tailed Hawk's nest in the top of a saguaro cactus in Arizona was awarded second place in the February contest. The photographer was Mrs. Edna Ward of Palm Springs, California.

APRIL CONTEST

Prizes in Desert's April contest will be awarded for the best pictures symbolizing "The Spirit of the Desert." This subject gives a wide latitude to photographers, since the intangible charm of the desert country has a different appeal to each individual. Rules of the contest appear on another page of this issue of Desert.



Petrified Hollow, a blue-grey valley at the base of colorful buttes of the Chinle formation. Petrified wood is scattered all over the cedar-clad slopes, but not much of it is cutting quality.

They Call it 'Petrified Hollow'

"I was too hot to move, and he was too hot to rattle." Thus does Harold Weight relate his encounter with a rattlesnake while hunting petrified wood in the plateau country near the Arizona-Utah boundary. Here is the story of a collecting trip to a little known region where Nature has provided both gorgeous scenery and beautiful rocks for those who do not mind the rough sideroads.

By HAROLD O. WEIGHT
Photographs by the Author

GREAT, white thunderheads pyramided into the August sky as Mother, Dad and I climbed to the lookout house on the north slope of the Kaibab plateau. Fresh from the immensity of the Grand Canyon, we thought it probably wasn't worth the effort. But we were wrong.

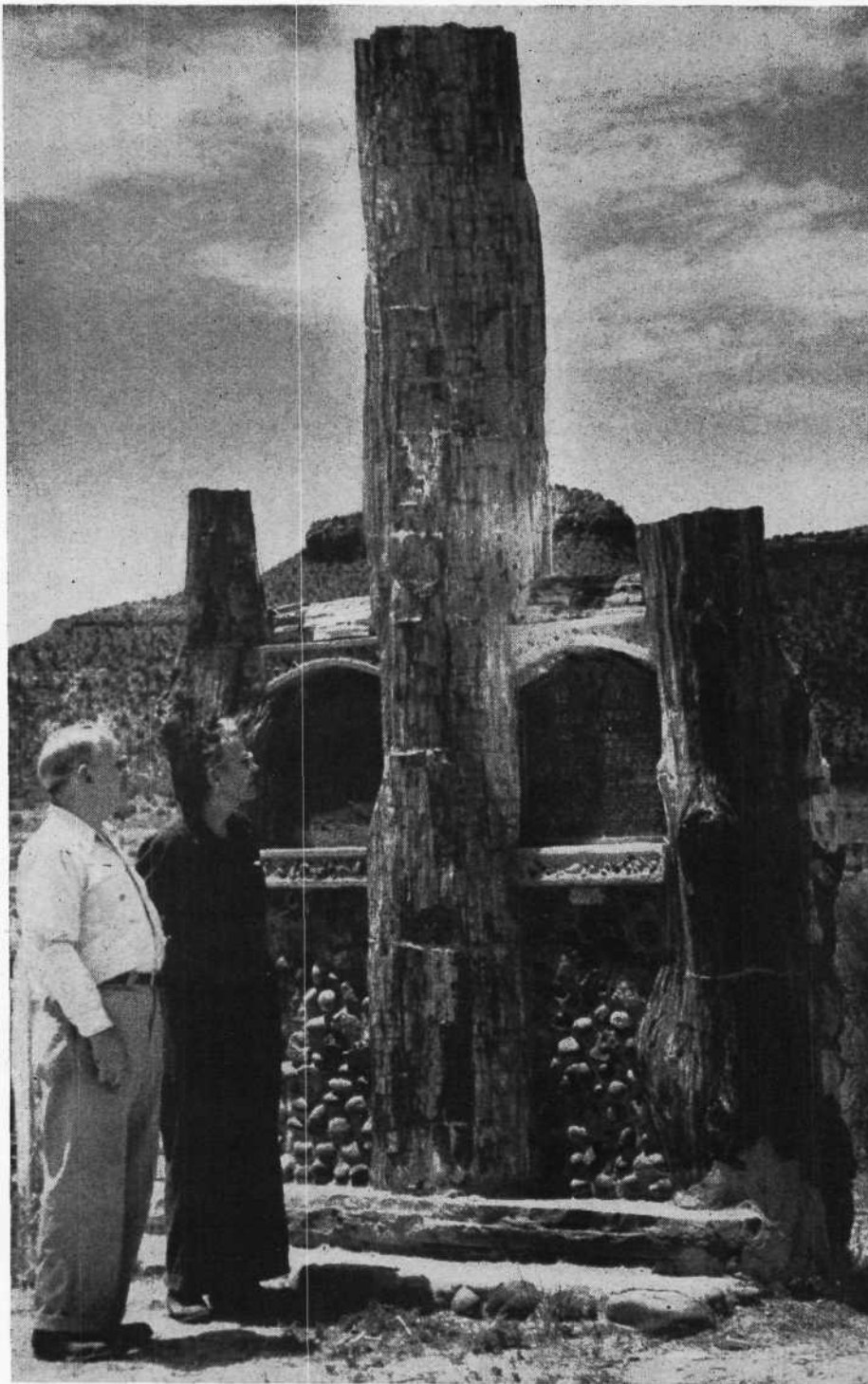
Stretched out before us were the giant steps of the southern edge of Utah's high

plateau. From the Permian buttes in the sage-grey valley below to the hazy Eocene heights of Paunsaugunt plateau, some two hundred million years of geological history were on display. Across the valley lay the flaming ramparts of the Vermilion cliffs. Above and beyond their jagged canyons rose the White cliffs and still farther, still higher, the Pink cliffs merged into the plateau top.

Through a series of national parks, our rock-collecting hunger had been raging unappeased. Scenery is wonderful, but the true rockhound cannot live by scenery alone. Somewhere he must scratch out a few pebbles if a vacation is to be entirely successful. But the National Park service frowns upon the carting off of its parks piecemeal. While to rockhounds this attitude seems harsh and unfeeling, it is undoubtedly justified. Every one of us knows some rabid member of our breed who otherwise would attempt to prove that the Grand Canyon, reassembled in his own back yard, was much more attractive than stuck way off in an isolated corner of Arizona.

The Vermilion cliffs form a red sandstone arc which stretches 120-odd miles from the Paria to Hurricane fault. They were laid down in the Triassic age, when ancient forests were being uprooted and buried in the sediment of shallow seas. At the bases of the red cliffs lie Chinle clays and Shinarump conglomerates. In these formations beautiful petrified woods are found. And we had heard of a spot in the Vermilion cliffs that the people of Kanab called Petrified Hollow.

As we looked down on Vermilion cliffs we had visions of some lovely new speci-



Monument to Jacob Hamblin, great Mormon frontiersman and missionary, located at Kanab, Utah, is built largely of petrified wood from the Vermilion cliffs area.

mens for the cabinets at home. When we drove on down U. S. 89, the masses of cloud over the great valley darkened, and thunder rumbled. Broad grey columns of rain smashed down on the crimson cliffs. But before we had reached Kanab, the sun was shining hotly and we realized that it was mid-summer, a fact that we had nearly forgotten on the cool high North Rim.

Kanab is the county seat of Kane county, and its history is inextricably entwined with that of the great Mormon frontiers-

man, Jacob Hamblin. First settled in 1864, it was abandoned under pressure of raiding Navajo. Hamblin re-established it as a frontier outpost in 1867 and maintained a home there during the years of his almost incredible travels through the southwestern wilderness, as an apostle to the Indians.

There is a monument to Hamblin west of the town where the highway turns. It and the Fort Kanab memorial beside it are of special interest to rockhounds, as they

contain specimens of almost every type of petrified wood found in the Vermilion cliffs.

Jacob wouldn't recognize the old town today. The movies have discovered the technicolor scenery of the Kanab country and one company or another seems to be there most of the year. Some startling contrasts pop up in the resulting half pioneer, half Hollywood atmosphere, and accommodations for tourists are frequently not available.

Whenever I go on the hunt for petrified wood it seems that the gremlins in charge of mechanical difficulties, road wrecking, bad weather and miscellaneous devilment unite for a blitzkrieg. On this trip, our directions for finding the wood proved inadequate, we bounced back into town with the granddaddy of all thunderstorms in hot pursuit and were forced to backtrack many miles to find accommodations that Hollywood hadn't grabbed.

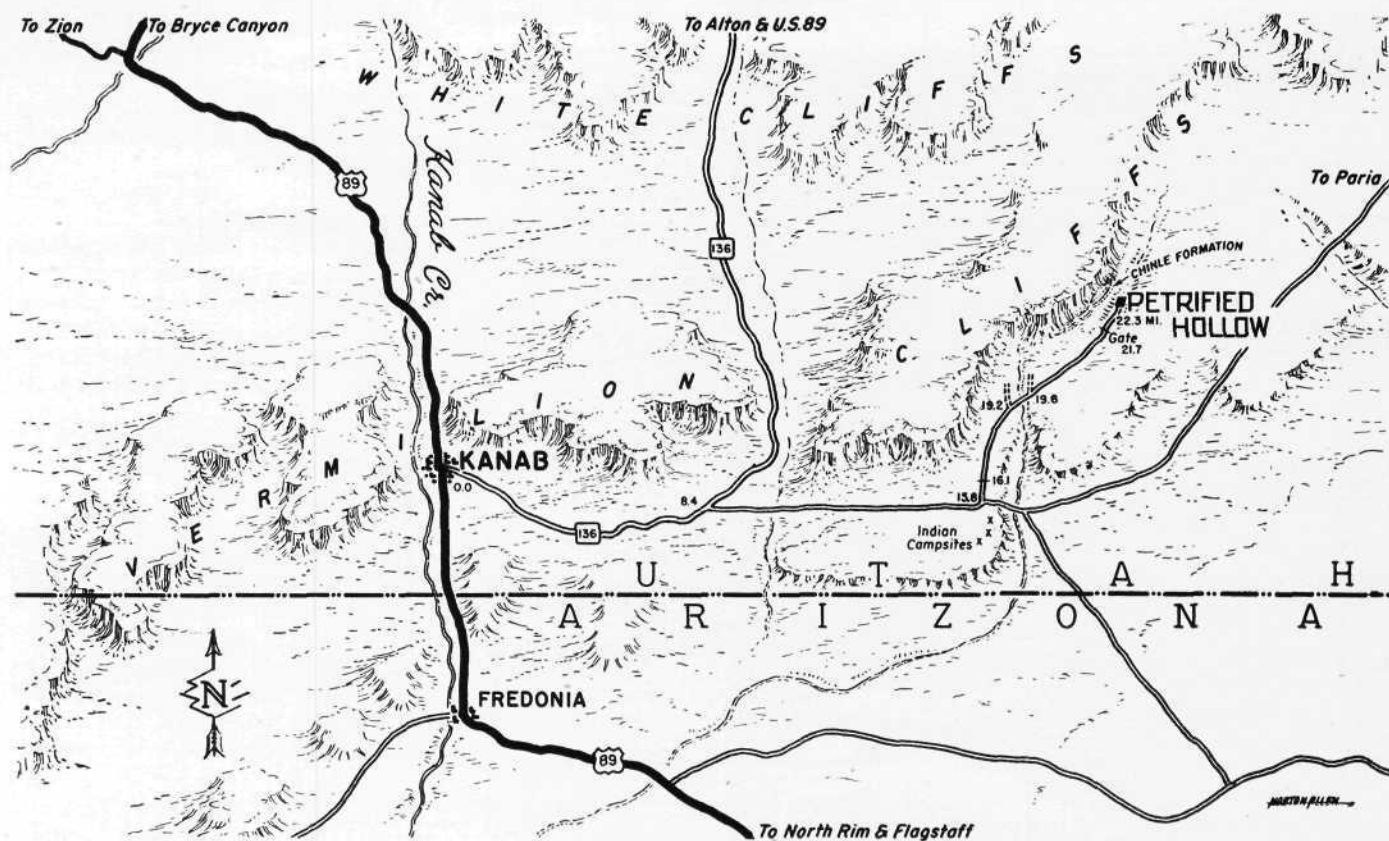
The next morning the shining blue sky looked as if it had never held a cloud. We took a deep breath and started again. Utah Highway 136 washboards around the shoulders of the Vermilion cliffs, and the going actually improved when we turned right on a side road at 8.4 miles. The side road ambled through sage and farm land and over little rises crowded with Utah juniper and piñon, following a low plateau. The edge to the south is called the Chocolate cliffs by some map makers, and "the rim" by the local inhabitants.

At 15.8 miles, the road curved to the right and dropped through a break in the rim toward the big valley. It was the most likely spot we had seen and we stopped to hunt. Almost immediately, as I climbed the gentle slopes to the south. I came upon tiny, colorful flakes of petrified wood. I started prospecting the washes, expecting to find larger pieces as I climbed higher. I found more chips.

I finally groaned and plumped down into the shade of a big cedar. It was quiet and peaceful where I rested. Lizards ambled unhurriedly over the rocks. A red-tailed hawk drifted low in the blue sky. A few feet away a cotton-tail rabbit sat up and blinked at me.

"Look, Doc," I said, "How do you prospect around here?" The cotton-tail blinked his eyes again and took off. I noticed that the ground where he had been sitting was almost black. And there, sticking out of the burned earth was a grey bit of pottery. Looking about, I saw the sites of a dozen ancient fires. The reason that I could find only chips became clear. I was in the midst of a great, primitive munitions factory. The pieces I had been gathering held new interest. It isn't everywhere that you can find cabochons roughed out by savage artisans of generations past.

As I climbed toward the edge of the rim, the sherds were so abundant in spots they formed nearly half of the surface covering.



Many types of pottery seemed to be represented—black on white and black on red, plain, and black, red and grey corrugated ware. Scattered among the sherds were more chips of agate and wood. But there was no evidence of permanent habitations. The camp probably was used when the cedar berries were ripe and the piñons ready for harvesting.

It must have taken many generations of Indians to leave so much debris. In recent times this was the range of the southern Paiute. According to W. R. Palmer, the homelands of three bands—the Paepas, the Unkakanigits and the Kaibabits—joined in this area. The Paiutes say that the painted pottery was made by the Hopis

who lived in the territory in more ancient times.

We set up camp in a little flat near the road, and spent the remainder of the afternoon wandering over the bluffs. I found a small cave blackened by the smoke of many fires, its floor covered with ash and the burned bones of small animals. In the shelter of a white cliff several hearths had been constructed. In this cliff I found the first big log of petrified wood. It could be traced for more than 30 feet in the sandstone, but it was not of cutting quality. Other large pieces that I found embedded in brownish conglomerate were also of poor replacement.

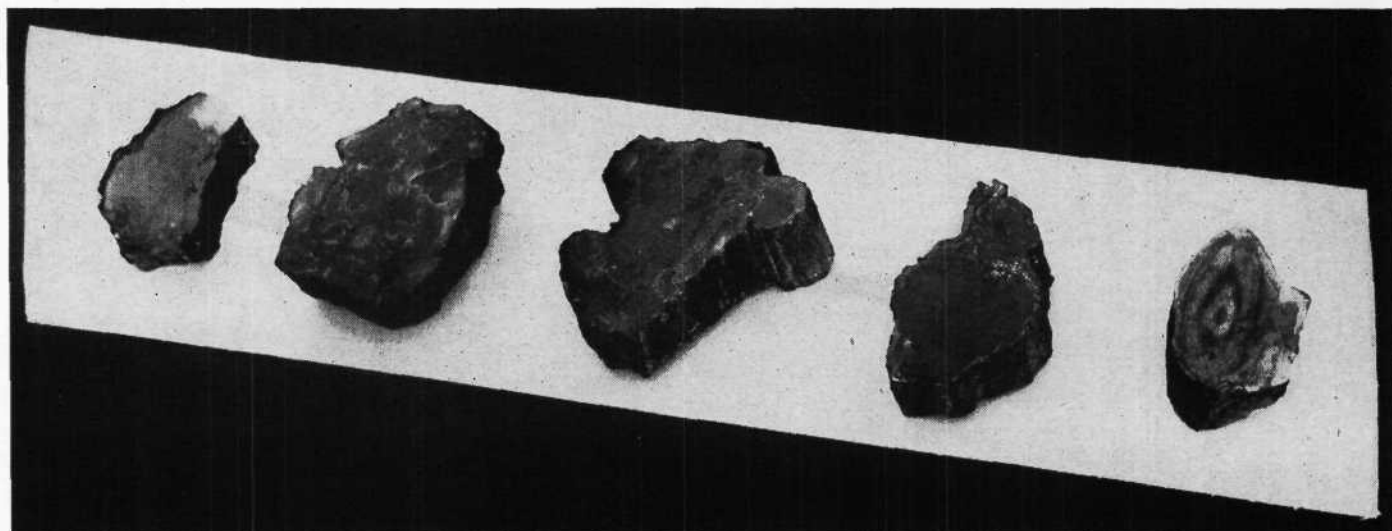
In the morning we packed up, but be-

fore we left, an old timer rode up to us. His hair was white and his face lined with the years and outdoor life, but he sat straight in the saddle and rode with rhythmic grace as he herded four beautiful horses toward range pasturage. We passed the time of day and I asked him about the alleged presence of a petrified forest in the vicinity.

"Sure," he pointed to a rutted road cutting off from the main one a few hundred yards from our camp. "Follow that over the hill and around the cliffs about six miles till you reach a blue valley. But there isn't much colored wood left."

We thanked him and he galloped smoothly on to round up the straying

Specimens of silicified wood from Petrified Hollow in Utah's Vermilion cliffs region.



horses. We held a council of war. The heat and dryness of the area had been sapping our water supply and we had only three gallons left. And our food reserve was not adequate. But we wanted that wood. The vote was three to nothing to go on.

It wasn't much of a road—more a double-rutted trail trending northeast. But it was in good enough shape except at the washes where we had to do a little work. What with that and an occasional prospecting side trip where the country looked favorable, it was early afternoon before we rounded a little point and came out in the blue valley of Petrified Hollow. We drove on to the bottom of the little valley and halted.

Great buttes of pastel shaded Chinle clay rose from a greyish-blue floor spotted with the green of cedar. Above the Chinle was the magnificent red of the cliffs and above that the blue and white of the summer sky. On all sides lay chunks and bits of petrified wood. In the washes, whole sections of logs could be seen. There was just one catch. About 90 per cent of the wood is not cutting quality. But scattered through it were pieces that in color and grade would match any found in the West.

We started our long-delayed rock hunting. But it was, to put it mildly, hot in Petrified Hollow. A process of dehydration seemed to set in the moment we entered the place. Water simply vanished before our thirst, and seemed to give little relief. Dad took a swig from his canteen. "This valley is the driest I've ever seen," he said. "Why, if we stayed here . . ." His voice became a croak and he had to take another drink to finish the sentence. "If we stayed here a week we'd be petrified ourselves."

Mother had her own system of hunting. She would scurry out to collect rocks when the sun went under a cloud. When it came back out, she would retire to the shade of a tree with the loot.

I set out across the rolling, wash-cut hills to the east, toward a small, cedar-clad hill. The farther I got from the road, the better the hunting was, until it became a process of selection. I sat down in the shade of a rock to do a little sorting. My eye caught a movement under the curve of the rock and I saw the deadly triangular head and sinuous body of a rattler which had crawled into the shade to doze away the torrid hours. For a moment we looked at one another. I was too hot to jump and he was apparently too hot to rattle. Nor did he start to buzz until I commenced offensive action.

I wish there were some way that we could communicate with these creatures. I would like to be able to say, "Look, Joe, you leave me alone and I'll leave you alone." I'm sure that the rattler would keep his end of the compact, and a lot of terror and bloodshed would be spared both sides. Most of the many that I have run

MOTORLOG

- 00.0 Kanab. Set speedometer at zero at junction of U. S. 89 with Utah 136. Go east on Utah 136.
- 8.4 miles. Leave U-136 for good dirt road branching right.
- 15.8 miles. Leave good dirt road for faint road branching left. Tree stands in V between main road and branch. Many evidences of old Indian encampments on surrounding mesas.
- 16.1 miles. Stock gate. *Close after passing.*
- 19.2 miles. Road forks. Keep right.
- 19.4 miles. Deep wash.
- 19.8 miles. Faint left fork. Keep right.
- 21.3 miles. Deep wash. Jasper in wash toward Vermilion cliffs.
- 21.7 miles. Stock gate. *Close after passing.*
- 22.3 miles. Petrified Hollow.

NOTE: In the Southwest somebody is always making a new road. Remember that you are heading for a large outcrop of purplish Chinle clay on a point of the Vermilion cliffs.

into were entirely on the defensive. Left alone, the rattler's only thought is to escape. But his night-wandering habits and natural tendency to strike if someone steps too near, makes him an impossible camp-fellow.

When I reached the car again, the sun was setting in a welter of red cloud behind the Vermilion cliffs. In the half-light, the beauty of the little valley was sheer magic. The soft light brought all the colors of the spectrum, it seemed, to the clay hills. Lavenders, blues, purples, greys, browns, yellows—and above them the deepening red of the cliffs and the darkening blue of the sky. The air had that crystalline quality that sometimes comes on desert evenings, and it was fragrant with the smell of the sun-heated sage.

When we had disposed of a rather slim supper, the night sky had cleared and the stars were out. Cool air began to stir. Our fire flickered, rose and fell, casting fantastic shadows toward the blacker shadows of the cliffs. In those same cliffs, in the chilling winters of the sixties, Jacob Hamblin and his Paiute allies had guarded

Desert In Photographs Contest

If you have taken a picture which more than any other seems to express the spirit of the desert—its cloud-flecked canopy of sky, the solitude of its canyons, the beauty of its sunsets, a lovely flower in a sweep of arid landscape—any of these and many more subjects may well reflect the courage, the mystery or one of those other intangible qualities which find expression in the desert country. From among your desert photographs select the one which to you is most expressive of what the desert means to you—and that is the picture Desert's staff wants for this contest.

First prize is \$10, and \$5 for second place. For non-prize-winning shots accepted for publication \$2 each will be paid. Entries must reach the Desert office in El Centro by April 20, and winning prints will be published in June.

HERE ARE THE RULES

- 1—Prints must be on black and white, 5x7 or larger, printed on glossy paper.
- 2—All entries must be in the Desert Magazine office by the 20th of the contest month.
- 3—Prints will be returned only when return postage is enclosed.
- 4—Contests are open to both amateur and professional photographers. Desert Magazine requires first publication rights of prize winning pictures only.
- 5—Time and place of photograph are immaterial except that they must be from the desert Southwest.
- 6—Judges will be selected from Desert's editorial staff, and awards will be made immediately after the close of the contest each month.
- 7—Each photograph submitted should be fully labeled as to subject, time, place. Also as to technical data: shutter speed, hour of day, etc.

ADDRESS ALL ENTRIES TO PHOTO EDITOR, DESERT MAGAZINE.

THE *Desert* MAGAZINE
EL CENTRO, CALIFORNIA



Mother of the author is sitting on a log of poor quality holding a section of "high grade."

the frontiers of Zion against the Navajo who forded the Colorado at the Crossing of the Fathers to raid southern Utah.

A single coyote sent his greeting from a distant hill. When Powell, Thompson, Dellenbaugh and the rest of the expedition camped before a similar cliff a few miles away, in 1871, the "wolves" fairly ringed the spot. At night they would come in to steal, one even carrying off a ham from its supposed place of safety as a pillow under Capt. Dodds' head.

Their descendants left us strictly alone, though. In the morning we checked our resources. We wanted to stay longer, but the inventory showed one small canteen of water apiece, a can of beans and one of tomato juice. While we weren't too far from supplies and water, desert common sense told us to move out. We had enough small pieces for all the cabochons we wanted, and the providential discovery of a small but completely silicified log weathering out of the road directly in front of the car gave us a nice group of cabinet specimens.

Much material has been removed from the Hollow, but a great deal remains. Large pieces of colorful wood are scarce, but we were told in Kanab that they may

still be found, back in the draws. The Kanab boys formerly rode out to collect specimens which they sold to tourists on the Grand Canyon buses, when Kanab was a lunch stop for the stages. It is a local fad to use the logs for porch posts and decoration, and collectors have no doubt helped thin the supply. But the average rockhound who would like some real souvenirs of a vacation in the tri-park area, will find all the beautiful cabochon material he wants here, and some larger pieces if he is willing to hunt them out.

The area is in public grazing land and is open to the rockhound so long as he uses common sense. Stock gates should be scrupulously closed and fires watched and put out. Camps should not be made in narrow washes in this country, nor should the car be left in them if there are storm clouds over the drainage area.

We will probably pick a time when the weather is a little cooler when we go back next time. But we are going back, and with food and water enough for a real stay. Even without the attraction of the multi-colored wood, this would be a beautiful spot to camp, a magnificent desert area to explore.

DESERT HOMESTEADERS ASK FOR SURVEYS

One hundred and twenty-eight 5-acre homesteaders who have filed on government land in Section 36 at the mouth of Cat canyon in Riverside county, California, are preparing a cooperative appeal to the United States Land office to survey and stake the tracts so they will know where to build their cabins.

The homesteaders are mostly metropolitan dwellers in the Los Angeles area, who have taken advantage of the dollar-an-acre-a-year land law to acquire cabin sites on the desert.

Initiative in organizing the "jackrabbit homesteaders" was taken by one of their number, Maud Joss of Pasadena, who called a meeting on the section late in February. Thirty entrymen responded, and formed a committee of five to set up a permanent organization to be known as The Mutual Assistance Group of Section 36. Under the chairmanship of Mrs. Joss meetings are being held at her home at 736 S. Madison avenue, Pasadena, to press the matter of surveys. Later plans for a cooperative well are to be considered.



Banner Queen ranch house. Scattered about the yard are many Indian metates and other relics of the aboriginal days in this restful desert valley.

Home on the Rim of the Desert

Banner Queen was once a roaring gold camp. But the rich ores pinched out and the camp had long been abandoned when Bill and Adeline Mushet rediscovered the rambling home where the mine superintendent had lived. It was a lovely setting high up on the edge of the desert. And now they have restored the building with its old-fashioned balconies—and have found contentment in operating it as a cattle and guest ranch.

By MARSHAL SOUTH

WHEN the late Charles F. Lummis, picturesque author and individualist of the Southwest, was building with his own hands his romantic home in the Arroyo Seco, Los Angeles, he had for spectator and self-appointed helper, a thoughtful little boy of twelve years who was tremendously interested in the building of walls, the fashioning of adobe bricks—and in each item of Indian handicraft in the Lummis collection.

The little boy's father was one of Lummis' closest friends. And with this passport, as well as that of his own eager interest in everything of the West, the Indian and the desert, it is not surprising that the bond of friendship which grew up between the boy and the celebrated author-builder was very close.

That little boy was William Mushet. And the fruits of that friendship with Lummis when the boy grew older, were a succession of construction jobs, all of them flavored with the picturesque. The very first of these was connected with the making and placing of adobe bricks in the con-

struction of the "Casa Adobe," an annex of the Southwest Museum.

That was the beginning of a colorful career of building and contracting. The word colorful is used deliberately. For, as Bill Mushet says today: "There are just two ways to do a thing. Either you can love it and put art into it, or you can figure it as just a job to be done—and make grim drudgery out of it. And I don't care if you are building a palace or a hog pen. The same truth applies."

And color and imagination and genuine love of the work in hand went into all of Bill's construction jobs. He prospered and made money. On the side—for his own amusement and his own home—he fashioned furniture and gadgets and bits of art work, each of them with the distinctive flavor of the pioneer West and the Indian desert country that is part of his nature.

Bill was fortunate. For when he married Adeline the team was complete. Adeline, or Ad, as she is known to all her acquaintances, was an artist in her own right. She sketched, painted, hammered upon silver,

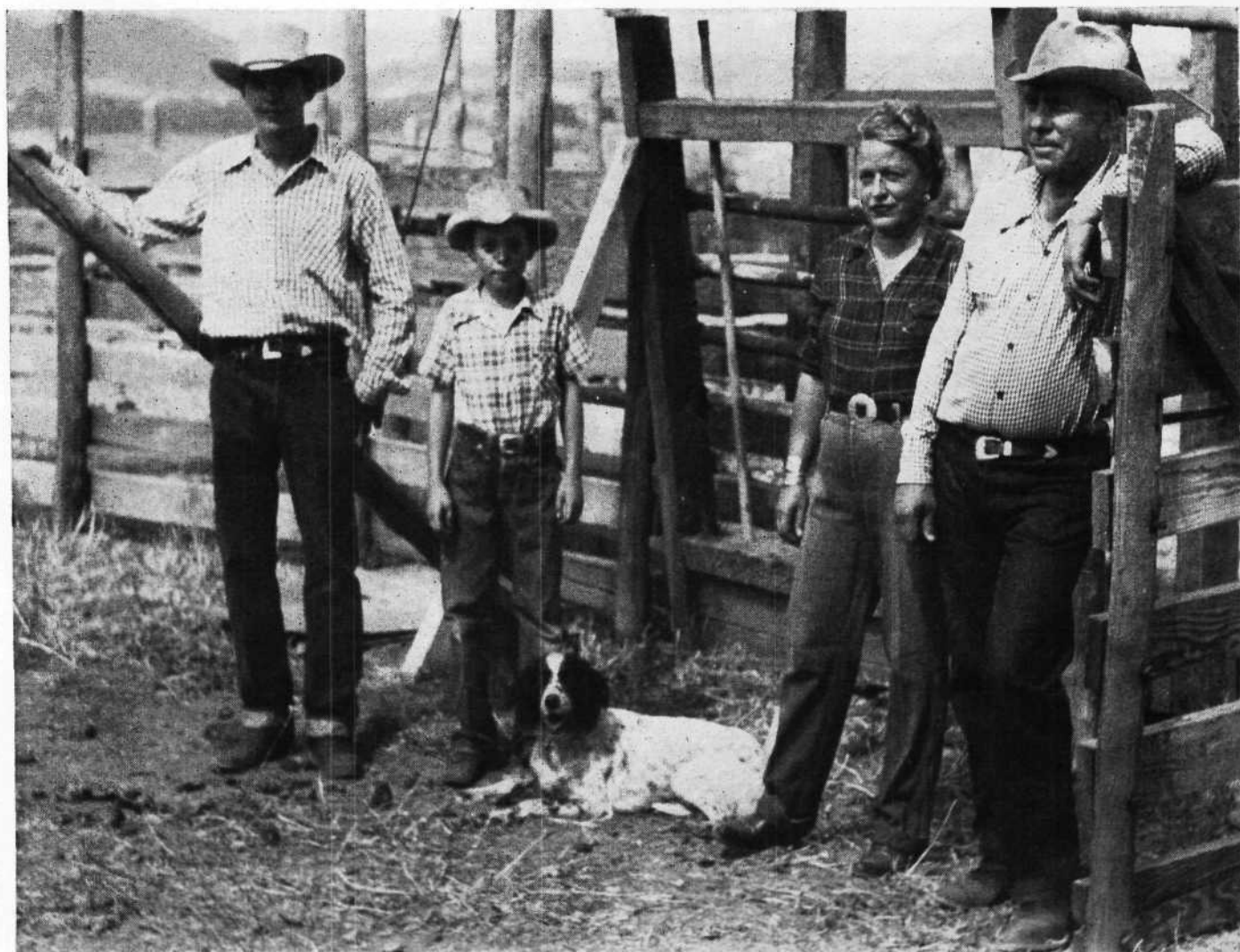
wove and wrought batik, and had a flair for interior decoration. Soon the Mushet home resembled a museum of handicraft. The job of adequately housing the collection became increasingly complex. All this time Bill was working and building and making money.

"But I wasn't satisfied," Bill says, "and Ad wasn't satisfied either. The thing was empty. There was something we wanted and hadn't got. Money isn't everything. You can't feed your soul on it. Besides, the youngsters were desperately important. We wanted to give them the best possible foundation in life."

Finally, Bill closed up his contracting business and Ad shut the door of her gift shop. They took their car and headed inland, away from the creamy surf of the California beaches. They headed toward the desert.

It was a long search. "We traveled all over the Southwest," Ad says, smiling reminiscently. "We hunted all sorts of sections and couldn't find a thing that suited the ideal we had in mind. We were discouraged when we turned homeward. It just didn't seem that the place we wanted existed anywhere on earth."

But it was on the homeward trip that they found it. Right in the desert foothills of their own backyard—in Southern California. It was the old story of the man who searched for diamonds—when they lay, all the time, within arm's reach of his own back porch.



The Mushet family at their corral. Left to right, Mike, Buzz, Adeline and Bill.

Bill and Ad had found their dream place. And it was in San Diego county, on the rim of that enchanting desert of the ancient Cabuilla Indians. Leaving Julian the road tips downward along safe and easy grades through the wind-harped music of the pines towards the long, mysterious vistas and mirage ghosted buttes that are the desert wonderland. It is a great land; a mighty and mysterious land which no modern intrusion of man—neither concrete highway nor droning airplane—has been able to rob of its charm and mystery. There it lies, shimmering in the sun; each turn of the road opens it up in new vistas of breath-taking beauty.

And, inset like a jewel on the inner edge of the mountain uplift that forms the rim of the great bowl, you will find Bill and Ad's haven. It nestles among the desert foothills, its green trees and cool trickling rills of water glistening in the sun. You can't miss it, for it is only six miles down the grade from Julian, and just a short distance beyond the ghost-remnants of the once roaring mining camp of Banner. Banner was a booming camp in its day, when the golden flood that poured from its mines drew hard-fisted miners and adven-

tures from all parts of the nation. But the winding-sheet of the silently drifting years has covered it. And today, the old town-site, almost utterly denuded of its once crowding buildings, sleeps in the shadow of its oaks and sycamores. Only the name remains. Banner! It is significant.

The Banner Queen ranch has captured and still holds much of the flavor and romance of the old time mining days—and of the days long, long before the miners ever came. In the gravels of the creek there is still gold, and beneath the broad spreading oaks there are worn mortar holes. Holes that were made who shall say how far back in the dim past by patient Indian women, grinding their acorns and mesquite beans. Somehow, beneath the oaks and the sycamores and beside the trickle of the little creek, there dreams a land of yesterday—a colorful atmosphere of the past which the genuinely western ranch maintained by Bill and Ad does nothing to disturb. Rather it adds to the charm. For with the happy gift which both of them possess they have succeeded in wedding the past to the present in a picture that is both restful and fascinating. And then, too, there is Leandro.

Leandro—Leandro Woods, to give him his full name—is an institution at the Banner Queen ranch. Leandro is one of those rarest of rare things, a genuine old-timer of the frontier. Romance—in boots—walks with Leandro. Just to see him roll a cigarette—to see him swing into his saddle—to see him wheel his horse amidst the dust and excitement of a round-up—is to catch a genuine part of the days on the border—the days that are almost gone. Leandro's eyes are almost always cheery, with a glint of genuine good fellowship. But there are slumbering lights in them. Once in a while they can flash hard. Then you can see another Leandro. A Leandro who once swung racing coaches across the dusty deserts of Sonora and whose eyes could glint hard along the barrel of a blazing six-gun. Because he is so good natured and nearly always joking, many people do not see the real Leandro. He is an old timer of the Julian district and *muy hombre*. Leandro can, if he will, tell you many a tale of the old days, the old days of Banner, and of Julian—and of the Mexican border.

Bill's business is cattle ranching. But he still amuses himself by making original

and artistic furniture for the rooms and cabins of his big ranch house. And Adeline still beats upon silver and indulges her talents for painting and interior decorating. Indeed I suspect that they get more satisfaction out of these pursuits than they do from the colorful business of the ranch itself.

Bill and Ad now take a few guests at their comfortable ranch house, where Jerry, Ad's sister, assists with the management. "I didn't have to do it," Bill told me, "but somehow I felt so darn selfish, locking up all this peace and sunshine for just ourselves. It didn't seem right. So I decided to make the experiment. It's worked out well and we're very happy over it."

Perhaps the reason why Bill's guest experiment has worked out so well is that neither he nor Ad look on their paying guests as guests. To them they are friends—and real friends at that. Guests may come to Bill and Ad as strangers. But they cannot remain so. There is something about the genuine warmth of welcome, something about the flavor of western hospitality which exists in the great ranch house living room, with its hand carved furniture and great ceiling beams, that banishes all feeling of aloofness and substitutes the warmth of a friendly handclasp.

"It's a pretty good world," Bill said to me not long ago. "Pretty good if you go after the good things in it. Only some people haven't sense enough to know what the good things are. Maybe I wouldn't have known either if it hadn't been for the things I learned from my Dad, and from old man Lummis. But anyway I'm glad I had sense enough to cut away from the grind and throat-cutting and to head out here. I didn't know just exactly what I was looking for when I closed up my business and started out to search. But anyway I found it. Found it right here."

He fell silent, leaning back in his old rawhide chair and staring out across the railings of the ranch house porch. The sun was setting and a maze of purple shadows were weaving mystery through all the tumble of mountains and ridges and far desert washes. You could almost see the Past there—hazy and mysterious as a half-veiled picture. And with it the Present—which is no less alluring. A night hawk went by like a shadow, brushing the ranch house eaves with a faint rustle of ghostly wings. And presently Adeline came out and stood silently, the turquoise and silver of her Navaio bracelets gleaming mysteriously in the shadows. The pinks and blues of the far reaches deepened and darkened and faded and the peace of night drifted in to fill the great, mountain-rimmed bowl.

Yes, Bill and Ad have found something. They have found it on the rim of the desert.

April Flower Parade on the Desert . . .

California Deserts

While the wildflower show on the Colorado desert this season will be limited in all but a few areas, a few flowers will be seen along nearly all the roadsides in late March and April unless their season is cut short by abnormally hot dry winds. Flowers should be at their best in Joshua Tree national monument during April.

However, there are a few places where gorgeous fields of blossom may be seen about April 1. One of these is in eastern Imperial county along the eastern toe of the Algodones sand dunes where patrolmen along the Coachella branch of the All-American canal report that a winter cloud-burst has carpeted the floor of the desert with green sprouts which will blossom late in March. Desert lilies will be found here in great abundance, and these will extend over the area east to the Colorado river and north of Highway 80.

Given rain in February or early March, April will be a month of flowers on the southern Mojave desert, reports Sara M. Schenck of Twentynine Palms. Creamy Spanish daggers bloom on the rocky hill-sides and the ground is variegated with yellow, white and blue of coreopsis and scale bud, California chicory, pincushion, chia and phacelia. There are bushes of golden senna and the purple bloom of California dalea. Apricot-colored clumps of desert mallow are found and in places the ground is covered with golden gilias or the pink of Scott gilias.

Rains so far in the Antelope valley region have been perfectly timed, Jane S. Pinheiro of Lancaster reports in a detailed survey of the area. But more moisture is now badly needed and past due. Unusually warm weather and the lack of late rain seems to be forcing wildflower plants into early maturity and consequent smaller bloom.

Poppies were in full bloom on Antelope buttes and were coming at Fairmont. Joshua trees were blooming at Lancaster and Mojave and might continue into early April, but the blooms were not numerous. There seemed to be few flowers toward Muroc, and Hi Vista expected an average year.

Most exotic of all blooms, thistle sage or Persian prince, has sent up great numbers of soft grey rosettes of leaves that give promise of a bumper crop.

Nevada

Desert travelers driving through southern Nevada will see plenty of beautiful flowers this spring, according to Dora Tucker of Las Vegas. Some will be showy, but the really lovely ones will be found in the side canyons and along old watercourses. Some, such as tansy mustard, star-dust and baby breath, are so small that they should be seen through a magnifying

glass, but they are perfect in every way. Later in the season there should be a display of cactus bloom such as has not been seen in the past four years.

With a little more March rainfall, Boulder Dam national recreation area should have the best flower display since the spring of 1941, in the opinion of Gordon C. Baldwin, park naturalist. By late March, the following should be blooming: four-o'clock, lupine, sand verbena, desert poppy, desert dandelion, stickleaf, desert mallow, buttercup, desert chicory, evening primrose, phacelia, aster and desert sunflower. The Joshua trees were just beginning to bud along the lower mountain slopes at the beginning of March.

Arizona

Plenty of fall rain got the Arizona areas off to a good start, but a dry winter in most sections has caused flower prospects to be below average. William R. Supernaugh, custodian of Organ Pipe Cactus national monument, reports that a great many spring annuals have been blooming all winter. Greatest displays should occur about the first of April. The desert there is showing signs of drying up, but the cacti have plenty of moisture stored so that there should be flowering all during April and May.

In Saguaro national monument, there has been virtually no rain since December 26. Because of this the spring flowering of most of the plants, especially the herbaceous ones, was expected to be below average, according to William L. Howenstine, park ranger. Normal peak period for flowering in area is last ten days of April and first ten days of May, but later blooming is expected this year. Ocotillo and palo verde should be blooming in April. Saguaro will probably reach its peak, as usual, early in May.

Desert wildflowers and weather are about two weeks ahead of season at Casa Grande national monument, but unusually late frost might upset conditions. A. T. Bicknell, custodian, listed following as April possibilities: staghorn cholla, hedgehog cactus, prickly pear, brittle bush, apricot mallow, lupine, desert marigold, mesquite, devil's claw, scorpion weed, gold fields, fiddleneck and crownbeard.

Because of the dry winter, spring flower displays in Tumacacori national monument area will be very limited, custodian Earl Jackson believes. Ocotillo, cream cactus, hedgehog cactus should be blooming, with verbenas and poppies at height of bloom. Flowering season here will reach its peak in late July or August. From Chiricahua national monument, acting custodian Charles C. Sharp reported ocotillo and some of the earlier-flowering yuccas may bloom in April in the lower canyon areas.

In a little ranchito out of Santa Fe, New Mexico, Pansy Stockton has developed a unique art that is all her own. She has discarded the paints and brushes of the conventional artist and depicts beautifully colored landscapes with bits of bark, feathers, lichen, leaves and moss—and has found a widespread market for her unusual "sun paintings."

Sun Painter of Santa Fe

By DOROTHY L. PILLSBURY

TEN MILES out of Santa Fe, New Mexico, on the San Sebastian ranch, a new kind of adobe house went up among the piñon trees a few years ago. Mexican adobe workers shook their heads and chattered in excited Spanish. "It's round," they exclaimed. "Never was there a round adobe house. *Verdad!*"

That round adobe house was copied after the kivas, the sacred ceremonial buildings of the near-by Pueblo Indians. Into it moved Pansy Stockton who is given to new ideas in building as well as in art.

Pansy Stockton has developed a new way of depicting Southwestern landscapes which she calls sun paintings. No paint nor dye touches them. They are intricately composed of bark, feathers, lichens, moss, and twigs gleaned from nature's storehouse. They sell faster than she can make them.

Sun paintings are not just clever handiwork. They hang in the Whitney Museum in New York City, in art galleries in Denver, Chicago, San Francisco, and Hollywood. They are in private collections in London, France, South America, the Hawaiian Islands and throughout the United States. One hung in the White House during the occupancy of the Franklin Roosevelts.

Shows of sun paintings meet with enthusiasm back and forth across the country. The only difficulty is that they are bought so fast, it is a problem to get enough together for a showing. Their outstanding quality is not that they depict the beauty of the Southwest with a peculiar velvet-like softness and a distinct third dimensional effect—they are the Southwest.

Back of these sun paintings is the artist, Pansy Stockton, a personality as warm, vital, and sun happy as the landscapes she captures. "Panchita," as she is known to her friends, has been a nature lover all her life. She grew up in the Southwest. Being a follower of western trails, she developed a second consuming interest—an interest in the Indians who first traveled those trails. Dark of hair and eye, Panchita has often been taken for an Indian, even by the Indians themselves. But she is Anglo-American with a generous thread of French ancestry. Aside from her great interest in them, the only connection she has with the First Americans is that she has been for many years an honorary member of the Sioux tribe.

The circular walls of her adobe kiva are decorated with a gorgeous collection of Indian dolls hung arm to arm like a frieze. She has an extensive wardrobe of Indian costumes. To see Panchita parading among the piñons in her yard or seated by her out-of-door campfire in full Sioux regalia—headdress and all—is to see something lovely and natural in its setting.

The top of her kiva is flat with shallow steps cut from adobe leading to its summit. When she first moved to the San Sebas-



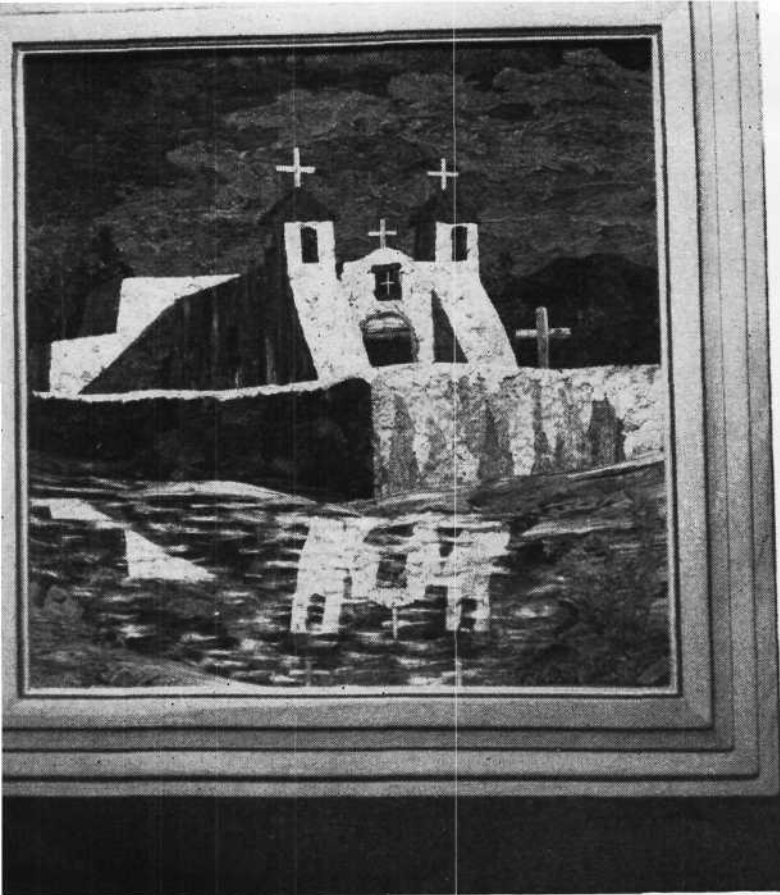
Panchita in Sioux costume.

tian, the inhabitants were somewhat startled at sunrise and sunset to hear a rich feminine voice lifted in song to the sun god. Now the neighbors take it all in stride—the outbursts of song from the kiva top and the pounding of Indian drums when Panchita entertains around her campfire on starlit summer nights.

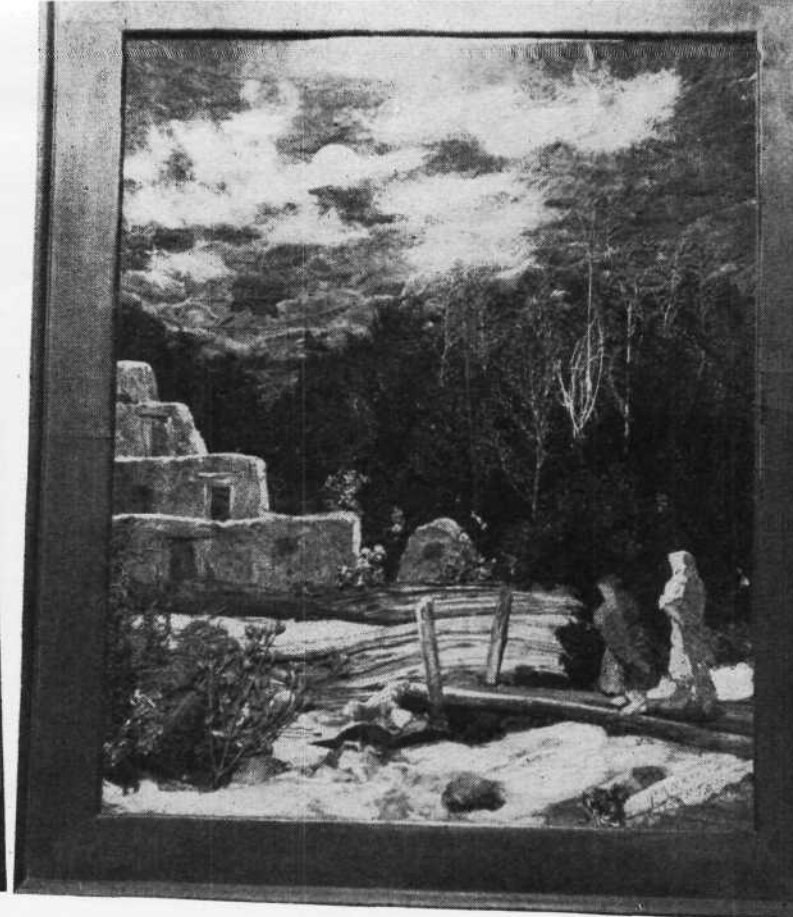
But for days at a time the kiva remains songless and lifeless. Panchita is far afield in her station wagon, gathering the materials for her sun paintings—lichens from rocks above timber line, bark from upland forests, moss from beside wind blown waterfalls, flowers from Alpine meadows, and twigs and leaves from mesa top and desert. "It's wonderful," she smiles with that warm sunny smile of hers, "to have such a good reason to wander all over the Southwest."

"Do you know how I started my sun paintings," she asked. "It was because of an endless search for color and an intense desire to give my paintings the illusive quality of depth. The palette painters who built up their landscapes with paint heavily applied with a palette knife had fascinated me. But their method did not seem to be exactly what I wanted."

"Yes, I have always painted in oils and water colors. When I was a youngster I took a prize for my painting. Then one day I picked up a bird's feather in my ramblings. It was the exact shade of blue I had been trying to find in paint for a bit of sky. Why not use the feather? And then I began dragging home other things picked up along the trails—a scarlet wild straw-



Sun painting of the old church at Taos.



Pansy Stockton's sun mellowed adobe.

berry leaf, a twig bleached by the desert sun. I began to experiment by pressing the gleanings from my wanderings into a cement backing with a heavy iron.

"First I painted the outline of the landscape I wanted to do. Then I literally built it up, often three layers deep, of bark, moss, and dried leaves. I found that much of the material had to be treated with acids to keep it from fading. But little by little I worked out a method. Since the sun paintings have become popular, many people have tried to copy them, but they can't do it," she laughed.

Panchita brought out sun paintings she had made to fill orders. Mounted and framed under glass they looked like any other well executed oil paintings except for their natural coloring and a magnificent sense of space and depth.

"Won't these fade," she was asked.

"They can't," she answered.

"But you must use some paint or dye."

"Not one drop," she insisted. "Why should I? All the materials I use were painted by nature, by rain and frost, and desert sun. Who," she demanded, "is a better painter than the sun?"

She held up a sun painting of the Grand Canyon, a subject that many good artists have tried with indifferent success to put on canvas. But Panchita had caught in her sun painting the illusive blending of color merging with color and the inspiring sense of limitless depth. The eye traveled from topmost sun drenched rim down, down to far distant depths veiled in mystery and remoteness.

The old heavily buttressed church in Taos is another favorite subject. Panchita has caught the flavor of the ancient place, its massive walls, out-of-plumb crosses, and even its reflection in a little puddle of water at its base.

Other favorite subjects are sun mellowed adobe houses hung with scarlet chiles, mountain waterfalls, and grey-green expanses of southwest desert land, swimming in a haze of overlapping color. Looking at them it was hard to realize that they had been "built"—tiny twig against twig, milkweed thread against thread with a patience that has something of the primitive in it.

"How many have you done?" she was asked.

"I've lost count," she laughed. "Hundreds—some of them nine by twelve inches, some four feet long."

"But when do you find time for such tedious work?"

"I'm up early—with the sun. Then everything is quiet and I can put my mind on what I'm doing."

"But I suppose you have to use many different kinds of tools?"

She laughed again, that good laugh of hers with western sunshine in it. "Only one little knife and a heavy iron to press the materials into the coating of cement."

Thus in simplicity and much industry are sun paintings done. "You'd be surprised," said Panchita, "the friends my work has brought me. People all over the world send me things to use in my sun paintings—white birch bark from New England, shrubs from the Holy Land, and kelp and sea grasses from the depths of the Pacific. They come in boxes and bales from the ends of the earth."

"You'll be interested in a strange paradox," she added. "Every bit of the material used in my sun paintings of the desert, comes from the bottom of the ocean. That is one of nature's jokes—or maybe one of her truths."

"Another odd circumstance is that my sun paintings should develop here in a country where the Navajo sand paintings have been done for hundreds of years. Sun paintings and sand paintings have at least a thread of family relationship. Not that I have ever heard of one of my paintings curing anyone of any disease as the sand paintings are supposed to do. But they have given a lot of people better vision. That is the best thing about them."

"You see people look at the sun paintings closely and they say, 'Why, that mountain stream is made of milkweed floss and so is that cloud in the summer sky. And that adobe wall is a piece of bark and that greenish butte is a bit of lichen.' All of a sudden they begin to look around with new vision when they are going through the country. They begin to collect things to send to me to use in my work. That is the best part of sun painting," said the trail-wise Panchita, "to give people new vision when they wander over our Southwest mesas, mountains, and deserts."



"... the early day miners had to fight as well as mine."

Unlike many of the fabled lost mines, here is the story of a buried vein of silver located in an area known to have been a rich silver producer. No one can say for sure that the old Clark mine is as rich as the legends would indicate, but at least the historical background and the locale described by the author are authentic. Recent advance in the price of silver has given added incentive to those who would seek to relocate the buried wealth of John Clark.

By JOHN D. MITCHELL

Illustration by John Hansen

Lost John Clark Silver Mine

SOMEWHERE in the Cerro Colorado mining district, southern Pima county, Arizona, is an old mine shaft believed to be about 125 feet deep and to contain, besides a rich silver vein, 40 tons of silver ore assaying 2000 ounces to the ton. The mine was discovered and worked for a short time by a man named John Clark, who left St. Louis, Missouri, in the early '50s to prospect for gold and silver in the mountains of the West. Making his way across plains swarming with hostile Indians, he came finally to the Cerro Colorado district where he located a vein of rich silver ore. The Heintzelman, Austerlitz, Albatross, and many other noted mines were being operated under protection furnished by the United States government.

In 1861 the soldiers were withdrawn from the territory of Arizona to fight in the Civil war. As soon as the troops were gone the Apaches under Cochise and others again started their raids on the small mines and ranches. Many miners, freighters and ranchers were waylaid and murdered. The two original locators of the old Albatross mine about five miles south of Cumaro wash were killed in a small cabin near the mine entrance. Their twin graves may still be seen on the high bank of the arroyo just north of the old tunnel.

Raids were frequent at the Canoa and Sopori ranches on the Santa Cruz and many people lost their lives. During an attack on Sopori an American woman gave birth to a girl baby. The mother was mur-

dered on the high point of rocks just across from the old adobe ruins where she along with others had fled for safety. The baby girl was rescued later and grew to womanhood in Tucson.

Two Mexican bandits disguised as miners, secured work at the Heintzelman mine and a few days later when they had familiarized themselves with the lay of the land, murdered John Poston, the superintendent, and eleven other employees. The Mexican miners joined the bandits in looting the mine offices, store and the ore bins at the mine. In their haste to reach the border ahead of the officers they were forced to abandon much of the stolen loot. The road from the mine to Saric, Sonora, was strewn with merchandise taken from the store.

When the officers arrived from Tucson several days later they found the bodies of John Poston and eleven employees, both men and women, scattered over the hillside between the store and the mine. The bodies of the dead were buried on the little red hill just north of the old store and office buildings, only the foundations of which now remain. The foundation of a round watch tower at the northwest corner would seem to indicate that the early day miners had to fight as well as mine.

Clark packed his ore in strong leather bags and had made one shipment of 40 tons to St. Louis, with a caravan from the Heintzelman mine. This shipment netted him \$80,000 as silver at that time was worth \$1.00 per ounce. When the soldiers

were withdrawn and the Apaches again started their raids Clark had 40 tons mined and stored in a small rock house near the shaft. Foreseeing that he would be unable to ship this ore with any certainty of it reaching its destination, he threw it back in the ground and pulled the timbers out around the collar of the shaft, allowing the loose dirt to cave in on the ore and the vein from which it had been mined.

Clark and the other miners and ranchers who had not been killed abandoned their mines and ranches and fled to Tucson for safety. The Apaches continued their raids until 1886, when by the joint operations of the American and Mexican governments they were rounded up and placed on reservations where they have remained to this day.

Clark died in the east, silver was demonetized and the old mines, with few exceptions, have laid idle ever since. All records of Clark's early day operations seem to have been lost. The late Mrs. Mary Black, wife of Judge Black, pioneer jurist of Santa Cruz county, taught school at the Heintzelman mine in the early '60s and knew Clark well. She told this writer she saw the pile of rich ore that Clark threw back in the old shaft. She further stated the shaft was located some distance from the Heintzelman mine and that it was on one of the great fault fissures along which the rich ore bodies of the district are found. These fissures are in the old andesite and are water courses through which the rich mineralized solutions circulate. Wherever

a vein or hard dike cuts across the fault it has a tendency to dam up the solutions causing them to precipitate the rich ore in great bodies of highgrade silver-copper. The rain water that falls on these soft outcrops forms a weak solution of sulfuric acid which leaches the silver-copper and carries it down to water level where it is precipitated as secondary enrichment. The soft outcrops are made up of kaolin and iron stained quartz badly crushed. Occasionally rich pieces of ore that have resisted the leaching process are washed out by heavy rains.

In the early days the Mexican miners would leave their work after each storm to hurry along these fault fissures and gather up these rich pieces of float, which often assayed from 5000 to 6000 ounces silver and 25 per cent copper. One good chunk was often enough to buy sowbelly and beans for several months.

Clark's mine was somewhat isolated and it was not unusual to see small bands of Apache warriors riding the high ridges just out of shooting distance for the old-time rifles in use by the soldiers and miners throughout the country. A sub-chief called Bobtailed Coyote and known to the American and Mexican miners as Robert T. Wolf, passed Clark's camp frequently. One day, when about half drunk, he left his little band of warriors out on the flats and came into camp alone. He was in a surly mood and demanded ammunition, tobacco, grub and more firewater, threatening to raid the camp if he did not get it. Clark told him that while he was short on all the above named articles, he did have some strong medicine with which he could lick hell out of the chief and any number of his warriors.

Clark was bothered with rheumatism and on one of his trips east he had purchased one of those old time electric machines used throughout the east by quack doctors. Clark set the machine up in the back room of his cabin and had been having a lot of fun by trying it out on the Mexican miners and freighters in the camp. Naturally the drunken Indian was anxious to know more about the white man's strong medicine. After some persuasion the Indian took hold of the handles which had been run through the wall into the front room. At a given signal one of Clark's friends in the back room turned on the juice by cranking the machine. The chief got the surprise of his life and when the cranking stopped and he was able to turn loose the handles he rushed out the front door and never stopped running until he had reached the little band of warriors he had left on the flats.

Bobtailed Coyote continued to ride the high ridges just out of rifle range, but never again came into camp. However, always when passing that way he never failed to dismount and walk up to the top of a little hill and go through some insult-

ing movements. This annoyed Clark and he decided to teach him a lesson that he would not soon forget.

One of Clark's friends in the East had sent him a high-powered rifle that had just been put on the market. This gun carried several yards farther than the guns then in use in the West.

Sometime later the chief and his band of warriors were seen riding the high ridge just east of the mine. As had been his custom in the past, Bobtailed Coyote dismounted, climbed to the top of the little hill on the prairie and prepared to start his show. Clark poked the barrel of his rifle through a crack in the wall and waited. When the chief was humped over Clark fired, putting a bullet through the fat part of his buttock. The chief jumped about six

feet into the air and let out a lusty war-whoop. He hit the ground running and the last seen of Bobtailed Coyote he was going over a hump in the prairie as fast as any buck Indian had ever done before or since.

Since the Apaches were rounded up in 1886, Mexican and Indian *gambusinos* have made a good living working these old silver mine dumps. There is not much left on the surface but any prospector or miner able to read the surface indications should, at the new price of silver, be able to find something good in these old silver mining camps that have so long been idle. Then too there always remains the possibility of running onto the old Clark shaft with the 40 tons of 2000-ounce silver ore at the bottom.

TRUE OR FALSE

According to the law of averages, you should get half of these right even if you do not know anything about the desert.

But most Desert readers will do better than that. A score of 15 is very good—18 is super. Anyway there is no harm in trying, and your score in Desert's quiz will improve from month to month if you are a regular reader. The answers are on page 29.

- 1—Salt for commercial purposes is harvested from the Great Salt Lake.
True..... False.....
- 2—Roosevelt dam was named in honor of President Theodore Roosevelt.
True..... False.....
- 3—Stalactites protrude from the floor of a cave. True..... False.....
- 4—On a clear day Mt. Whitney may be seen from Palm Springs, California.
True..... False.....
- 5—Woodpeckers sometimes build their nests in the trunks of saguaro cactus.
True..... False.....
- 6—The desert padre, Father Garces, was killed by the Indians at Yuma, Arizona.
True..... False.....
- 7—The burro is a native of the desert of the Southwest. True..... False.....
- 8—Elephant Butte dam is located on the Colorado river. True..... False.....
- 9—The states which meet at the famous "Four Corners" are New Mexico, Arizona, Utah and Texas. True..... False.....
- 10—The north rim of Grand Canyon is higher than the south rim.
True..... False.....
- 11—The book, *Rim of Christendom*, written by Herbert E. Bolton, is devoted mostly to the missionary work of Father Kino. True..... False.....
- 12—Hopi Katchina dolls are moulded from clay. True..... False.....
- 13—The peccary, or javelina, runs wild in southern Arizona.
True..... False.....
- 14—Fluorescent calcite always fluoresces blue. True..... False.....
- 15—A line drawn north and south through Santa Fe, New Mexico, would be east of Albuquerque. True..... False.....
- 16—Lowell observatory is located near Flagstaff, Arizona. True..... False.....
- 17—The blossom of the ocotillo is always red. True..... False.....
- 18—Only native vegetable dyes are used in coloring yarn for Navajo rugs.
True..... False.....
- 19—The Joshua tree is a member of the lily family. True..... False.....
- 20—Many of the descendants of the original cliff dweller Indians were still occupying the stone houses in the cliffs when Kit Carson came West.
True..... False.....

Fremont's Pepper-grass

By MARY BEAL

PERHAPS you call it Desert Alyssum, or Explorer's Pepper. The specific name honors that distinguished explorer of the West, John C. Fremont, who first discovered it along the Mojave river. You'll find it growing in abundance over a large part of the Mojave desert—a low rounded evergreen shrub which looks in springtime like an oversized bouquet of Sweet Alyssum, our old friend of cultivated borders. Its racemes of tiny white flowers have the same lacy appearance and exhale a similar delicate fragrance. The little desert bush comes by that resemblance naturally, being a cousin of the dainty garden plant. Both belong to the extensive Mustard family, which has given us many other ornamentals, such as Candytuft, Stock, Wall Flower and Rockets, and also food plants and condiments—Cabbage, Turnips, Water Cress, Radish, Mustard and Horse-radish. The common name of the genus, Pepper-grass, comes from the pungent juice characteristic of the family.

Explorer's Pepper has useful as well as ornamental qualities. The Arizona Indians used the seeds as food and seasoning, and the watery juice shares with other Mustard family relatives anti-scurvy attributes. It also is recommended as a hair-tonic, combined with Sage, Henna leaves, and Cinchona bark. Each bush with its amazingly profuse bloom is a natural repository of nectar, a magnet for bees and one of the high-ranking honey producers of the wild bee-gardens.

Botanically it is classed as

Lepidium fremontii

Lepidium, little scale, because of the numerous flattened seed pods which densely cover the bush in fruiting season. Usually rounding in outline, a foot or two high, and as broad or broader, with many green branches from woody lower parts. The linear, pointed leaves are an inch or two long, smooth and hairless, the surface veiled with a faint bloom. One of the first shrubs to bloom, sometimes as early as January, all through the spring it is a perfumed sphere of lacy white blossoms, the racemes so crowded as to completely conceal the herbage. The individual flower is about $1/6$ of an inch long with 4 clawed petals and 6 stamens. The thin pods are light in color, somewhat heart-shaped, winged and notched at the apex.

This *Lepidium* is a very common perennial of the mesas over a large part of the Mojave desert, between 2000 and 3000 feet elevation, but may be found as low as 500 feet and as high as 4500 feet, from dry sandy and gravelly flats to rocky mountain slopes. It extends into Inyo county and Nevada, southwestern Utah, western Arizona, and the northern Colorado desert.

Resembling Explorer's Pepper but much smaller is the following, Mesa Pepper, or in botanical parlance,

Lepidium alyssoides

A perennial but not shrub-like, only the base being woody, the several green stems usually only a few inches high (5 to 8), the herbage hairless. The leaves are up to $1\frac{1}{2}$ inches long, pinnately parted into oblong-acute lobes, except the upper ones which are entire. The racemes are short and dense, the wee white flowers not more than half the size of the Fremont species, the pods oval and extremely small. The plant, as the specific name indicates, bears a strong resemblance to the garden Alyssum. In California it is confined to the eastern Mojave desert but ranges eastward into Nevada, northern Arizona, New Mexico and Texas. It also is closely allied to Mountain Pepper-grass, or more familiarly Bronco Pepper, which follows.

Lepidium montanum

By some botanists the foregoing species is classed as a more



Fremont's Pepper-grass, named for the explorer who first discovered it along the Mojave river. Mary Beal photo.

enduring variety of this mountain biennial. Sometimes there is only one stem branching above, but oftener there are several from the base, 10 to 14 inches high, the herbage minutely hairy. The leaves vary from less than an inch to nearly two inches in length, the uppermost sometimes entire, the others pinnately parted or incised. The white flowers are disposed in dense racemes and the pods broadly ovate to orbicular, slightly notched at apex, finely reticulate. It favors mountain valleys from 2500 to 7000 feet in elevation, blooming in April at lower altitudes and as late as September in the higher locations, in northern and central Arizona, Nevada, New Mexico and western Texas, also in Mono county, California, and northern Mexico.

Lepidium flavum

Yellow Pepper-grass is a prostrate annual, 4 inches to $1\frac{1}{2}$ feet across, the several branching stems spreading out from a basal rosette of rather fleshy leaves, the yellow-green herbage smooth and hairless, the brittle stems breaking easily at the joints. The basal leaves are oblanceolate in outline, cleft into short, rounded lobes, the stem leaves varying from oblanceolate to obovate, somewhat lobed or toothed or entire. The bright yellow flowers are bunched into head-like racemes, mostly in the leafy axils or forks. The pods are broadly elliptic, slightly winged and widely notched at the apex, the surface marked by a fine network. This attractive yellow mat adorns broad sandy washes and dried flats from Inyo county, California, through the Mojave and Colorado deserts to Lower California, and west to Nevada. Try it sometime to spice up a salad if it grows in your neighborhood.

There are a number of other species of *Lepidium* in the desert but these are the most noticeable, the others being classed mostly as weeds.

To a Night-Blooming Cereus

By BARBARA STARR CARTER
Glendale, California

With an airy grace
You pose against the night,
A gay, luxuriant flower.
Excitement and mystery you impel,
Glowing in the moonlight
At the magic hour.
I watch you unfold . . .
As from my tower
Your beauty like a heady wine
Leaves me tremulous with delight.
White velvet petals
Glisten with dew
And elfin lights.

Pale mist of loveliness
Glowing with an inner fire.
Slowly you lift your head . . .
Handsome . . . ardent . . . luminous.
And enchantment is upon a darkened world.

WILD FLOWERS

By ELIZABETH M. ROTH
South Pasadena, California

I wandered out on a clear March morn,
And what did I find on the way?
A patchwork of wild flowers wonderfully
bright,
Spread out in a pattern gay.
There were patches of yellow as bright as the
sun
("Desert gold" it is called in the book)
Patches of Lupine as blue as the sky,
Sand Verbenas with Persian rug look.
I went farther on, and what did I find?
Shooting Stars of deep lavender hue,
Tidy-tip daisies and Brodiaea tall,
Called onions by some careless few,
Golden Poppies, our state flower, added their
part
To the quilt Nature spread on display,
Their color so brilliant it looked as if fires
Were creeping up mountainsides' way.
It's a picture not easy to put into words,
And on canvas it looks overdone,
You must see for yourself this quilt of rare
charm
Dame Nature spread out in the sun.

DESERT NIGHT

By JAMES E. ROACH
North Las Vegas, Nevada

The moon is molten silver,
Its beams of glistening gold;
And the desert night
'Neath the brilliant light
Is the Garden of Eden of old.

BE CONTENT

By TANYA SOUTH

Walk then contented of your lot.
Had you earned better, you would not
Be as you are! Walk full content,
Knowing that in God's element
Truth conquers all in time and must,
And Fate is ever right and just.

SUN WORSHIPPER

By NELL MURBARGER
Costa Mesa, California

I have a rendezvous with life . . .
I want to feel and see and live;
I want the desert wind and sky,
And all the sun that God will give . . .

MOUNTAIN MAN

By GEORGE E. BUTTS
Fontana, California

His step was sure as the mountain goat
That played on the rocky crag;
His stride as swift as the western wind,
As quick as a running stag.
The prairie gave him his food and drink,
The sweet warm earth his bed;
Of buckskin were the clothes he wore,
A coonskin covered his head.
He little knew, or little cared,
As he roamed the desert sand,
That he blazed the trail for the pioneer
To a newer, better land.
He bared his head to the wind and rain;
His home was a rocky cave.
He's sleeping now on a mountain top
In a lonely, unmarked grave.

THE DESERT IS CALLING

By G. C. CONSTABLE
Pasadena, California

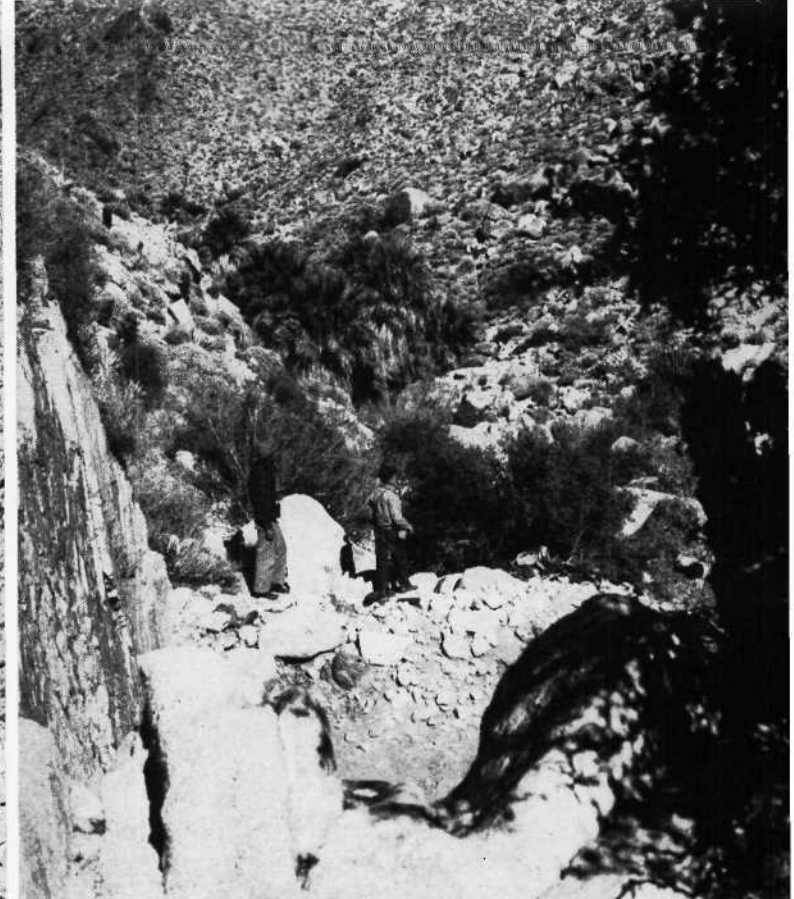
I must go
Where the joshuas grow,
Where the sand is bleached and dry;
To a region policed
By buzzard and beast
And peopled with gaunt cacti.

I dream at night
Of the dazzling light
Of stars that are close at hand,
Of the carmine dye
In the sunset sky,
And dawn in that wondrous land!

I seem to hear
With my inner ear
The coyote's plaintive call
And the stealthy beat
Of unseen feet
When silence is over all.

I feel the need
Of the desert's creed;
Of its stark reality.
I must go again
From the world of men—
The desert is calling me.

Photograph by M. D. Bradshaw, Thermal, California.



Looking down into Carrizo Palm fork from the railroad right-of-way 400 feet up the slope.

This is the main group of 72 palms in Carrizo Palm fork. Arles and Tony Adams in foreground.

Palms of the Carrizo Country . . .

By RANDALL HENDERSON

THIRTY-FIVE years ago when engineers were surveying the route for a new railroad through the precipitous Jacumba mountains on the western rim of the Colorado desert, they found deep in one of the tributary canyons a lovely oasis of native trees fed by a generous spring of good water.

Thus it came about that between 1912 and 1919 when construction crews were blasting rock and drilling tunnels for the San Diego and Arizona line, connecting the interior desert of Arizona and Southern California with Pacific tidewater, an important part of their water supply came from Palm fork of Carrizo gorge. A pump was installed on the floor of the canyon to boost the water 400 feet up the mountain-side to the construction camp.

The pump has long since been removed, and the oasis, having served its hitch in the scheme of man's progress, has reverted to its primeval solitude.

Carrizo palms, this oasis is called. Passengers on the railroad get a fleeting glimpse of the oasis deep in the canyon as the coaches dart in and out of the tunnels on the scenic Carrizo gorge route between San Diego and Imperial Valley. There are

The palms were in the wrong canyon—but the hikers finally located them. Here is the story of a two-day exploring trip in the rugged Carrizo gorge country that lies on the western rim of the Colorado desert, and of little known palm oases found in this region.

21 tunnels on this line. They are numbered from the west, and the main group of palms may be seen only during the few seconds it takes to travel between Tunnels 20 and 21.

For many years I shared the popular error that Carrizo palms were in Carrizo gorge proper. Recently Arles Adams and I decided to spend two days exploring this area, for we had been told there were other native palms in the canyon system. The third member of our party was Arles' 13-year-old son, Tony.

Both of us previously had visited Carrizo palms. We had reached them by hiking up the railroad from Dos Cabezas station at the foot of the mountains, a distance of about three miles. Now, with a jeep at our disposal, we planned to drive up Carrizo gorge as far as the car would go, then hike the remaining distance to the palms.

Leaving U. S. Highway 80 west of Coyote Wells, we followed the route of the proposed Imperial highway which, when the road-builders get around to it, will connect the Los Angeles metropolitan area with Imperial Valley by a more direct route than the present Highway 99.

In passing, I want to warn motorists to keep off the desert end of this Imperial highway route. We had to resort to our four-wheel drive in some places to get the jeep through—and we were going down hill. The road has had no maintenance for many years and storm waters have played havoc with some parts of it.

The Imperial highway crosses lower Carrizo gorge at a point landmarked by a low hill known as Egg mountain. Here we swung off the highway route and headed south up the wide arroyo of lower Carrizo. It was sandy going but by keeping 20-mile-an-hour momentum we had no difficulty.

The floor of lower Carrizo is covered with a dense forest of smoke trees. Driving upstream in a thickly wooded smoke tree wash is challenging sport. There are many dry watercourses in the floor of a wide canyon, and the game is to pick the right one. If one guesses wrong and gets into a pocket of thick shrubbery, then it is neces-



Passengers on the San Diego and Arizona railroad get a passing glimpse of the palm oasis as the coaches travel from tunnel 20 to tunnel 21.

sary to stop and retreat. And when you lose your travel momentum in sand—well, all desert motorists know the penalty for that.

We planned to explore as many of Carrizo's tributary canyons as could be covered in two days. We came to the first of these tributaries 1¼ miles up the canyon on our right. As the entrance was blocked with boulders, we left the car and hiked.

From my prospector friends I have learned a lesson of great aid in locating canyon palms. I look for float. The float in this case is bits of palm frond or fruit stem to be found in every canyon where palms are located. It washes down and lodges with the drift along the sides of the water course. Invariably such evidence is found when palms are growing higher up in the canyon.

A mile's hike up that first canyon yielded neither water, palms nor palm float. So we crossed that one off and returned to the jeep. The next tributary, three-quarters of a mile up the canyon on the right had a wide sandy entrance. This was easy going for the jeep and we followed it 3.3 miles to where the watercourse divided, and on a little bench in the fork was a stone cabin, a camp maintained by cattlemen. Water had been piped down from a spring in one of the tributaries above. The camp was unoccupied at the time, and from this point we explored the tributaries on foot. The right branch yielded "pay dirt." High up on a ridge we saw three aged palms. There may be more of them over the hump beyond but we lacked time for further exploration of this area.

Continuing up the main canyon in the car we passed through a gate in a fence the cattlemen had built across the wash. The next tributary on the right had four young palms. There may be more trees higher up, but further exploration of that side canyon will have to await another weekend. Two days is not enough time fully to explore the Carrizo canyon system. Our main quest on this trip was to reach

the palms we had seen from the railroad.

We passed more tributaries coming in from both sides of the gorge, but it was growing late and we wanted to take the jeep as far as it would go up the main gorge before dark. Boulders were becoming more numerous and we had to pick our way among them. The smoke trees of the lower canyon had given way to a heavy growth of willows, with some mesquite.

At 9.9 miles from our starting point at Imperial highway the going became too rocky even for the jeep, and we made camp on the sandy floor of the gorge in the shelter of a rocky wall. Supplementing our supply of dead wood for the campfire that night we had some splintered railroad timbers which had washed down from upper Carrizo gorge where they had been discarded by the construction crew 30 years ago.

Early the next morning we continued up the main canyon on foot. In less than a half mile we came to a stream of water. We followed this for nearly two miles, gain-

ing elevation steadily, but without seeing any evidence of palms.

The railroad grade could be seen high up on the mountainside above us. But where was the palm oasis we had expected to find in the bottom of Carrizo gorge at this point?

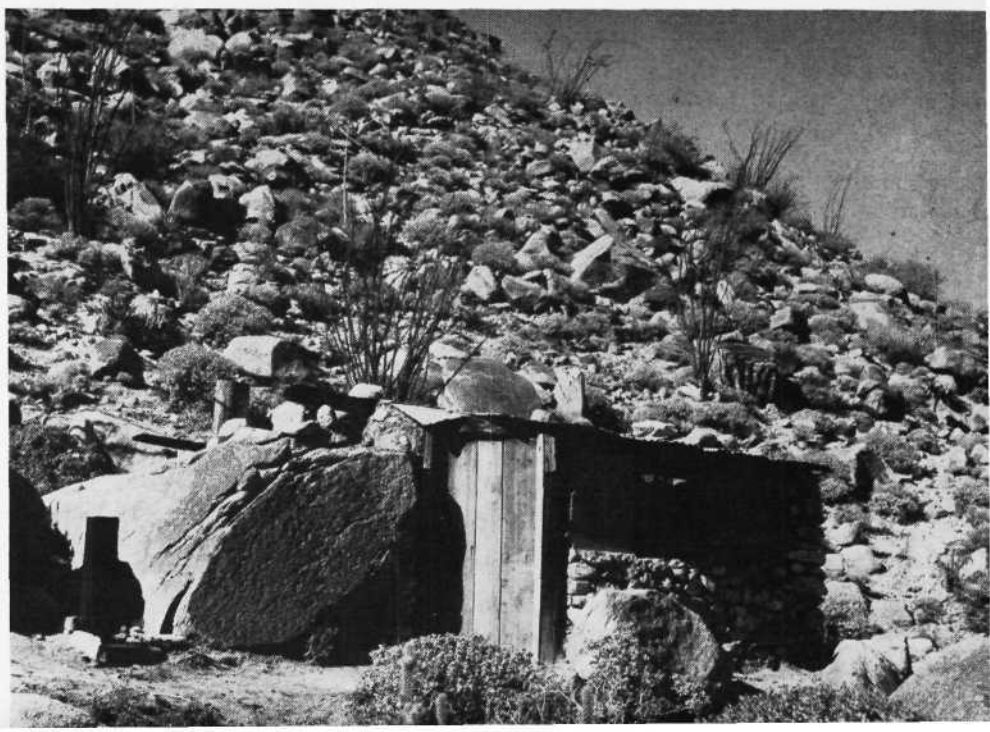
Gradually it became evident the palms we were seeking were not in the main gorge of Carrizo after all. We compared notes and decided the oasis must be in another watershed, probably along the railroad farther down toward the floor of the Colorado desert.

If this guess was correct, then it would be necessary to climb the steep talus slope to the railroad and follow it down. And that is what we did. It was 800 or 900 feet of steep climbing up to the tracks. As we climbed higher the rugged terrain of upper Carrizo spread out before us. Highlighted by the early morning sun it was a gorgeous panorama.

Walking down the railroad track a half mile we came to Tunnel 19—700 feet in length. As we emerged from the lower end of the tunnel we realized we had passed under a ridge and into another watershed. And there in the headwaters of another canyon below was a little group of palms, an outpost of the main oasis we were seeking.

Farther along we went through Tunnel 20, and then we saw 400 feet down a steep slope a dense little forest of palms nestling on the floor of the barren-walled gorge. We worked down over loose rocks of the railroad embankment and found a delightful spring gurgling from among the rocks at the roots of the palms. Except for the concrete foundation of the pumping plant once located here, the oasis appeared never to have been disturbed by visitors. As a matter of fact, it seldom is. For this spot is very remote, and inaccessible except by

Cattlemen's camp near the head of one of Carrizo's tributaries.



a railroad whose trains never stop on this mountain grade.

When I visited this oasis in 1936 I counted 164 palms here. Now, 11 years later, the number had increased to 172, extending along the bottom of the canyon a distance of 300 yards. Some of the older trees have been burned in years past, but there were many mature trees with full skirts of dead fronds.

At several places during the day's hiking we had found the grinding stones of desert tribesmen who knew all the waterholes in this region and had left their mortars and broken pottery as relics of their prehistoric residence here.

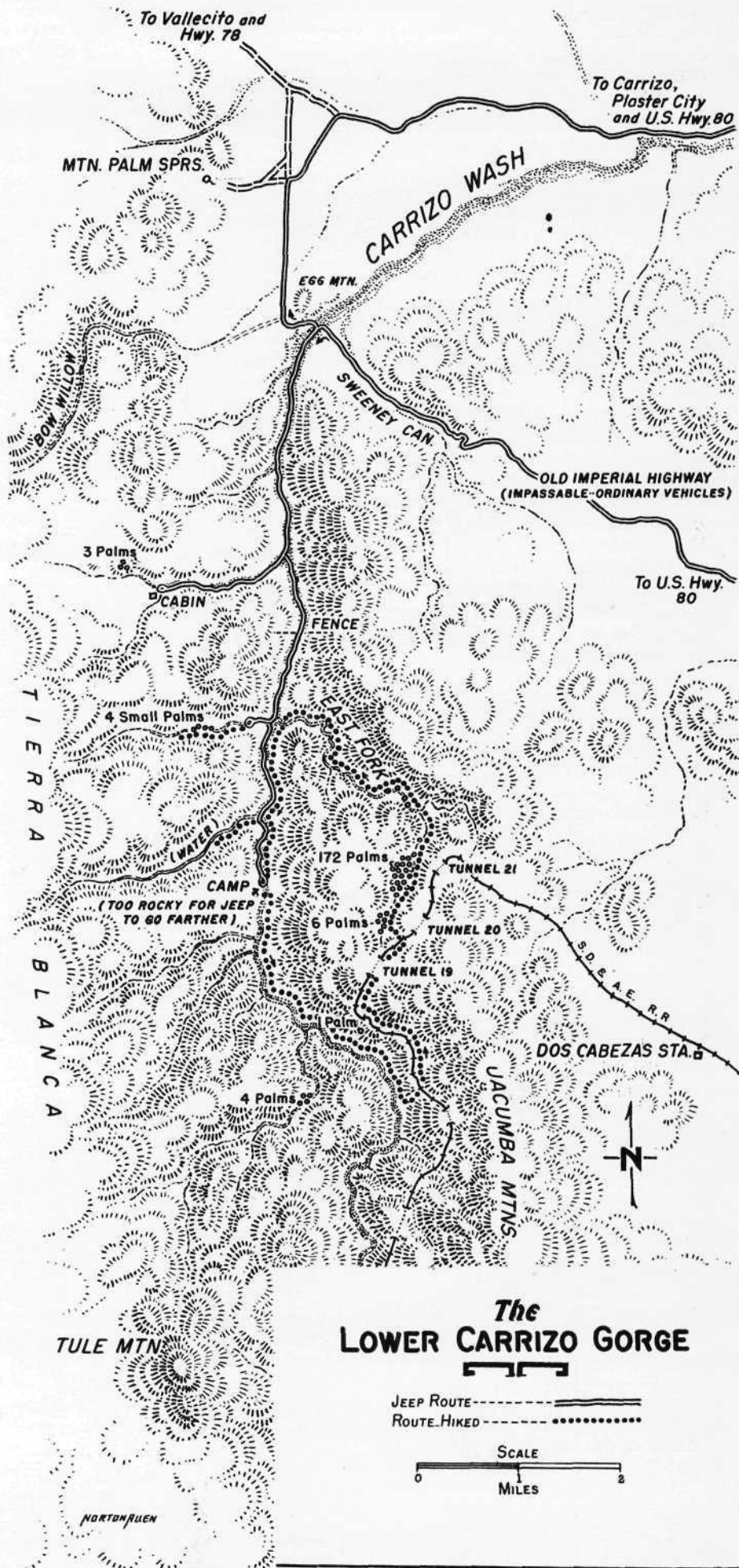
Our trip was in January and the only blossoms seen along the way were an occasional encelia, ocotillo and chuparosa. The latter—the hummingbird flower—is the one desert species which seems to blossom every month of the year. It was too early for the normal blooming of ocotillo and encelia—but an occasional one in a sheltered spot was out two months ahead of schedule.

I have no conclusive theory as to the origin of the native *Washingtonia filifera* which appears in widely scattered areas over the Southern California desert. But during the years when exploring for these palms has been a hobby, I have reached one definite conclusion as to the manner in which, even today, they are being spread to new waterholes and springs. Undoubtedly the Indians, in prehistoric times, carried the edible seeds from one spring to another. But occasionally I have found in out-of-the-way places young palms which obviously sprouted there since the Indians ceased to roam these canyons.

The answer, I am convinced, is coyotes. They are the "Appleseed Johnnies" who have played an important role in seeding and reseeding the *W. filifera* in the Colorado desert, and in Mexico as well.

Coyotes eat the palm seeds as they fall to the ground, but their digestive organs absorb only the sweet outer skin. The actual seeds pass through the animal undigested. And if the reader could have been with me on numerous trips when I have found the canyon floors scattered with coyote dung which consisted very largely of undamaged seeds, I am sure you would share this conclusion with me. Perhaps the Indians, and even the birds, played minor roles in the spreading of the palm—but as far as I am concerned I am crediting one good deed to the much-maligned coyote.

Now that we had reached our goal, Arles and I debated the best route back to the jeep. We were not sure whether the canyon in which the palms were located was a tributary of Carrizo, or an independent canyon that came out on the floor of the desert somewhere down toward Dos Cabezas. We knew that over the ridge to the west of us was Carrizo gorge and our camp. But that ridge was high and steep.



The only way to get this geography clear in our minds was to follow down the canyon in which the palms were located, and see where it came out. We decided to do that even though it might take us off in the opposite direction from our car and involve an overnight bivouac on short rations.

Continuing down the canyon we encountered an occasional palm, generally a young tree which probably had sprouted from seed washed down the watercourse. We were traveling north down this canyon, and we had gone nearly two miles before we became convinced that it swung around and entered Carrizo as a tributary some distance below where the jeep was parked. Actually, we followed it three miles and then had to deadhead up Carrizo another two miles to our camp. It was four in the afternoon and we estimated the day's hike at nine miles, not including the vertical distances involved in tramping over this kind of terrain.

Undoubtedly there are more palms in the Carrizo canyon system than we found on this trip. It would require many days of hiking and climbing to do a thorough exploration of the region. Our log of the day's palm discoveries is as follows:

PALMS	
Right fork above cattle camp	3
First tributary on right above fence	4
South tributary opposite tunnel 19	3
Ravine below railroad grade just above tunnel 19	1
Upper east fork of Carrizo, above tunnel 20	6
Palm fork of Carrizo between tunnels 20 and 21	172
Trees dispersed along Palm fork below main group	17
Total palms	206

The cattlemen probably have names for some of the tributary canyons we visited, but those names have not yet appeared on the maps. When the map-makers get around to it, it is to be hoped they will give preference to terms already applied by old-timers who know this region.

Arles and I never retrace our own route if we can help it, so the return to El Centro was over Imperial highway route to Mountain Palm springs and thence over the old Butterfield stage road to Plaster City. The Butterfield trail along Vallecito creek is passable, but I would not recommend it for tourist travel. It is rough, and very sandy in places.

Carrizo palms properly belongs in the Anza desert state park, and I believe it is planned to include them in the park if this has not already been done. In the meantime, their best protection is their complete isolation, and the rugged terrain in which they are located. A delightful oasis is Carrizo.

COLORADO RIVER FORECAST

There has been no material change in water supply outlook of Colorado river basin due to January precipitation, according to February forecast of United States weather bureau. There has been a slight downward revision, but outlook at this time is for exactly normal inflow at Lake Mead. About 65 per cent of normal precipitation which may be expected has already been observed. Water supply for 1947 will be satisfactory if remainder of the year is normal.

On the upper Colorado flow will be slightly above normal except Roaring Fork, seven per cent below normal. Total flow at Grand Junction on the Gunnison will be 15 per cent below normal with near normal in Taylor river and 20 per cent below in Uncompahgre basin. Dolores river will be near normal and outlook for Green river basin is satisfactory.

Duchesne, Price and San Rafael basins are good with a range of 120 to 140 per cent above normal. San Juan, with exception of Los Pinos basin, will be 15 per cent low. Los Pinos basin forecast calls for only 50 per cent of normal.

Snowfall varied widely in the Colorado basin, but was slightly below normal as a whole. Glenwood Springs had 61 per cent of normal, while Fraser showed 164 per cent. Accumulated snowfall for the season was near normal. Precipitation came principally from three storms, one January 6, one from January 13-15 and the last January 27-31. Total for the season was near average. Temperatures for month were slightly subnormal at most stations. Due to unusually warm December, temperatures for season were still well above average.

Sez

Hard Rock Shorty of Death Valley . . .



A lone prospector, dust-covered and dragging his feet with weariness as he plodded along behind his burro, trudged down the sandy trail toward Inferno store.

"Huh!" said Hard Rock Shorty, perched on the soap-box seat under the lean-to porch in front of the dilapidated frame building. "Guess ol' Pigsaw Bill ain't found his mine yet. He'd be steppin' along a lot spryer 'n that if he had any gold in his poke."

The well-tailored tourist having his car filled with gas, waited for Shorty to go on with his story. Finally, he could restrain his curiosity no longer. "You mean he's got a gold mine out in those hills?" he asked.

"I dunno," said Hard Rock. "But ol' Pigsaw thinks so. He ain't never hit a jackpot yet, but maybe he's got one this time—if he can find it."

The tourist wanted to hear more of the story, and continued asking questions. Shorty's only response was an occasional grunt. But there was no getting rid of this pest, so Hard Rock finally took the easiest way out.

"Yu see it was this way, stranger. It all started with that bee cave up Eight Ball crick. Wasn't much sugar durin' the war, and Pigsaw'd lost his ration book anyway, so one day he

took his burro and went up the crick to rob the wild bee cave. He filled a couple o' them heavy paper cement bags which he'd cleaned out, an' hung 'em over the pack saddle. But the paper wuzn't as strong as Bill thought, an' on the way home one o' them bags busted and leaked honey all over the burro. It was an awful mess, and when Bill got back he turned the beast loose for a few days.

"When the burro didn't show up fer a week Bill went out lookin' fer him. He found him up the canyon near them soda springs. The hair o' the animal was all caked with sand where it'd been rollin' in the gravel. As Bill wuz lookin' it over tryin' to decide how to git rid o' that layer of sand and honey, he saw somethin' sparklin' on the side of the burro. It was a spec o' gold. So Bill scraped all the sand he could off the burro's hide and brought it back to camp and washed it out. That sand was lousy with color.

"Somewhere out around this desert that burro did his rollin' in a rich placer field. But it might be two miles away or twenty, an' Bill hadn't any notion which direction. He's blame near wore hisself out this winter pannin' sand all over Death Valley and its side canyons—but I know by his looks he didn't find it today."



Gridiron-tailed lizard—*Callisaurus draconoides ventralis*. Photograph by Glenn Vargas.

His Protection -- Speed and Color . . .

By RICHARD L. CASSELL

ONE OF the speediest members of the lizard family, the little fellow with the gridiron-tail whom you often meet on the desert mesas and in the arroyos is *Callisaurus draconoides ventralis*. He has a couple of cousins whose species names are *gabbii* and *myurus*.

You'll not find it easy to cultivate a close acquaintance with *ventralis*, partly because he is very much on the alert, and partly because his protective coloration makes it difficult sometimes to see him even when he is almost underfoot.

He seems to have no low or intermediate speeds. Either it is standing still and perhaps bobbing its body up and down for reasons that have never been entirely clear to the scientific men, or else it is darting away so fast the eye hardly can follow.

With much patience, it is sometimes possible to stalk this lizard, and in that event it will be noted that his tail is marked by dark and light cross bands, the number ranging from four to eight. The males have a bluish patch on either side of the belly.

In flight the tail is carried in a graceful loop over the body. When the lizard is standing still, just before it darts away, the tail will start wagging from side to side. Normally it forages during daylight hours, but in midsummer avoids the midday heat. When in danger, it may dart under loose sand for protection.

The food consists largely of insects although leaves and blossoms sometimes are eaten. Some observers have reported that this lizard changes color, becoming a lighter shade to prevent undue absorption of heat when the temperature rises above 104 degrees.

According to Hobart M. Smith in *Handbook of Lizards*, the range of *C. ventralis* or eastern gridiron-tailed lizard is central southern Arizona and south into Sonora. *C. myurus*, or northern gridiron-tailed lizard is found in western Nevada, and *C. gabbii* ranges through southeastern California, southern Nevada, western Arizona and south into Baja California and Sonora.



"Kino on the Trail." Diorama in the museum at Tumacacori national monument in Arizona. National Park Service photo.

He Saved the Life of a Savage

If nothing else were known about Father Kino, one episode in the life of this courageous padre of the desert Southwest would reveal him as a man well deserving of the high place in the hall of honor which has been accorded him by historians. Here is a record of 24 hours in the life of the Jesuit missionary.

By HAROLD BUTCHER

WHEN an Indian rider arrived at San Cayetano del Tumacacori in the early morning on May 3, 1700, with a message for Father Eusebio Francisco Kino, he knew it contained urgent news. For the letter was from Father Agustin de Campos, his fellow-priest at San Ignacio del Caborca. Father Campos only two days previously had sent a courier over the 140-mile trip from Dolores to San Xavier del Bac with letters for Kino. Over such trails and distances, the padres did not dispatch messengers so frequently unless there was great urgency.

Father Kino was tired. The previous day he had covered the 50 miles from Del Bac to Tumacacori. For many days he had been riding long and hard—performing the

baptismal ritual, solemnizing marriages, meeting Indian chieftains. Always there were distant settlements to be visited—and his zeal for the salvation of these eager savages of the Pimeria Alta—the land of the upper Pima Indians—drove him on and on at a pace that would have dismayed a less courageous missionary.

The letter was indeed urgent. Father Campos told him to hurry because if he could reach San Ignacio by the morning of May 4 he might be able to save the life of an Indian who was to be beaten to death by the Spanish soldiers as punishment for having run away. Punished for the crime of running away from the invaders of his own country!

The soldiers were a constant problem to

the padre. While he mingled amicably with them, the fact could not be denied that their purpose and his were different. Their job for the King of Spain was to see that the Indians stayed conquered. His purpose was to bring them the Christian faith. The soldiers wanted to mete out swift retribution for any signs of rebellion. Indians who would not obey were savages to be slaughtered. To Kino they were fellow human beings, potential Christians, men, women and children who could be civilized. Many times the cruelties of the soldiers created such bitterness that Father Kino appeared to face utter defeat.

When Father Francisco Xavier Saeta, of the Caborca mission, was killed by a band of Pima Indians five years previously—first martyr in Pimeria Alta—the punishment inflicted was brutal and indiscriminate. In a general slaughter more than 50 Indians were killed, but only five or six, according to Kino, were guilty. This treatment, of course, created a sense of outrage among the Pimas, and it was not until wiser counsel prevailed and the actual wrongdoers were caught that the

tragic affair ended. Justice was tempered with mercy. The Indians who took part in the murder of Father Saeta, after having been prepared for death and given the last rites of the Church, were pardoned. The ill effects of the tragedy began to wear off.

Memory of this incident made Father Kino eager to defend the miserable Indian who had been caught by the Spaniards and who was to be beaten to death the next day. It is more than likely that when he said Mass on the morning of the third he remembered the Indian and prayed that he would be in time. He must not fail Father Campos, and he must not fail the runaway whose life depended upon him.

The welfare of the Indians was his reason for being in this country. It might be said that ever since he was eighteen he had prepared himself for just such a challenge as this. As a young man he had recovered from a sickness which everyone, himself included, had thought to be fatal. But in the midst of that illness he had prayed—prayed hard and with faith—that his life might be spared, adding that if he did not die he would join the Society of Jesus. Become one of the disciples of that very strenuous one-time warrior, sixteenth century Ignatius Loyola, who had turned from the military life to become a soldier of Christ. Kino had asked his superiors, after entering the Society November 20, 1665, to be sent on some "difficult mission:" to the Indians, or the Chinese. After years of pleading he had been sent to carry the Christian faith to the New World. This May 3 was the 19th anniversary of that day in 1681 when he arrived in Vera Cruz, Mexico, to begin his great work.

The years in America had been filled with hardship and adventure. Kino was explorer and scientist as well as missionary, and he lost no opportunity to extend the frontiers of geographical knowledge. It was he who finally proved California to be a peninsula and not an island. But nothing was ever as important to him as his work among the Indians. When he had made friends with them he instructed them in the Christian religion and baptized them. Then he went on to teach them how to engage in peaceful pastoral pursuits instead of in warlike activities. He taught them how to be ranchers. The first Arizona ranches were those cultivated by the padre for the benefit of his Indian converts. He was the first man to bring domestic animals into the state. He trained the Indians as cowboys, farmers, stockmen, cooks and carpenters. On April 24, nine days before this critical May morning, he had noted in his diary: "Here at Guevavi there were also 84 head of sheep and goats, a good



Padre Kino Memorial in Tucson. Western Ways photo.

field of wheat, maize and beans ready for harvest, and an earth-roofed adobe house for the Father whom they hoped to receive." When Indians were shown how to produce all they needed they had no excuse for running wild in war. Moreover, the dozen or more great ranches he established served as centers for future missionaries who arrived to continue what Kino had started.

Father Kino calmly proceeded with Mass. Whatever the problems of the day, however hurried he might be, it was his duty as a priest to say Mass. Today, when every minute was important, was no exception. He could not start on his long journey until he had fulfilled the greatest duty of all.

Even when the last Latin word of the Mass was said he took time to reply to a letter received two days before. Presumably he ate some breakfast. He was far too wise a traveler to imagine that anything was to be gained by skipping his food. Perhaps someone else, one of his helpers, had

already fed and saddled the horse. When all was ready he mounted and rode off.

Starting soon after sunrise the padre found the morning cool. It warmed up as the day grew older but the heat of summer had not yet come. The journey would not be uncomfortable. His diaries contain no record of his thoughts as the horse trod the rough but familiar road. If he was responsive to the wild beauty of nature his writings do not reveal this. When he is moved to expression he links what he sees with his religion, as when the beauty of a bright spring day led him to write, "At various spots along the road the roses and other flowers of various colors were so beautiful and charming that it seemed Nature had put them there as a reception to Our Lady of Loreto."

Neither was he consumed with anxiety as he rode on this momentous May morning. He was far too practical for that. He knew how long the journey would take and the time at his disposal. He knew his own powers and those of his horse. He



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THE DESERT INN

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PALM SPRINGS, CALIF.

would be on time, and he would save the life of the Indian.

His route led through the present city of Nogales and then through San Simon. He reached Imuris just before midnight, having ridden 62 miles since early morning. Only eight more miles to go!

Very early on May 4 he said Mass in San Ignacio, and then, with father Campos, he interceded with the military authorities in behalf of the Indian. Here his skill, which would have carried him far in the diplomatic life of Europe had he cared to follow such a career, came into play. He knew these military men. He could speak their language. He had to get along with them despite the trouble they caused him. He could also be quite firm in insisting on what he believed to be right. The fact that an Indian had run away was no reason for beating him to death. The prestige of Spain, the authority of Spain's king, would not be enhanced by such barbarity.

Punishment? If the Indian deserved to be punished for his offense it should be to enable him to learn a lesson. Justice would prove more effective than cruelty. Another Indian killed might provoke further resentment among his fellow Indians, doing more harm than good.

The verbal weapons in Father Kino's diplomatic armory were more powerful than any possessed by the soldiers who had intended to kill the Indian. The padre's words prevailed, and the Indian was released. Spain's prestige remained intact and Father Kino gained the devotion of a man whose life he had saved.

When Kino received word at San Cayetano of the Indian's danger he was on his way to Dolores. After he reached San Ignacio, and had successfully interceded for the Indian, he proceeded on his way according to his original plan. He literally saved the Indian's life in his stride. It was all in the day's work. On May 6 he arrived at Dolores, his journey completed.

In the museum of the Tumacacori national monument is a diorama portraying "Kino on the Trail." Seated on his horse, he surveys the landscape of Pimeria Alta. By him, standing by a second horse, is an Indian guide. In the foreground are cattle, reminders of the domestic animals Kino introduced into the Southwest. The scene symbolizes the great pioneer work which the padre accomplished—the grand country where he operated, the Indians whom he sought to help. And in the saving of the runaway Indian's life all this effort achieved the heights of drama.

Kino first visited the site of the Tumacacori mission in 1691. The mission is now an impressive ruin. But the diorama, like the memorial in Tucson, is there to tell the story of a great priest, a heroic pioneer, a Christian gentleman who loved the Indians enough to come and live with them and to bring them the benefits of the civilization of which he was a part.



Jess Abernathy in his lapidary.

Stone that Flashes Fire

By COURTNEY COTTAM

JESS Abernathy, professional lapidarist of Salt Lake City, collects opals for a hobby.

"I found my first opal," he confided, "in California 15 years ago in a volcanic basalt rock. It was orange color, shot through with every color-radiance. I polished it, and got opal into my blood. Since then I have collected over 50 of them. One of my choicest is a blue banded agate with a heart of fire opal."

"Are they found on the surface like geodes and snowflake obsidian?" My curiosity and lack of information amused him.

"I've traveled farther and got less in my search for opals than any other rockhound, I believe," he said. "They are found underneath the surface and you must dig for them." He continued, "They are found in volcanic areas and ancient ocean and lake beds. Opal has the same hardness as glass, and the ones found in Nevada are cold—icy cold—when mined."

These Nevada beds are much newer than the Australian. This accounts for the fragility of the stones. They are easily scratched, and that dims their luster.

Abernathy's black opals are outstanding. One, looking like unpulled molasses candy, is spiderwebbed in jet and shot through with vivid red and green fire. Another, like crystal, has coruscating bands of green and red fire, with scintillating golden glints.

"Pep" characterizes a Mexican stone, a golden-orange gem with green and flame darting lights.

A water-worn stone from Mexico, its fires muted by the water-frosted surface, seems dull until immersed, when its fires dance in true opaline splendor.

The blue flash of an opal from Australia awakens memories of the fairyland imaginings of childhood; and with this blue is the green and purple flash-fire that makes the opal different from any other jewel.

You do not have to be a rock collector to appreciate the flashing colors of a beautiful opal. There is no other stone like it—and it is one gem which scientists have not been able to reproduce synthetically. Here is the story of opal.

In Abernathy's collection is a Mexican bronze opal like a carbuncle, coming from a volcanic rhyolite. Its snappy fires leap and change into myriad colors, with kaleidoscopic rapidity.

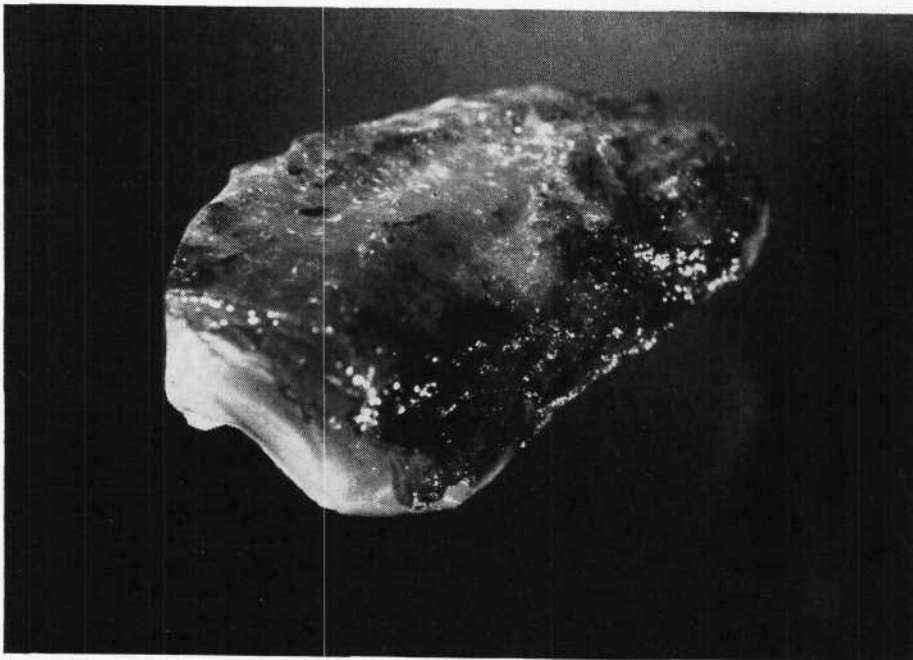
A milk stone is shot with pin-fires of jade and chartreuse.

For years opals were shunned because of a superstition—a recent one—that they were "sorrow stones" bringing bad luck to their owners. This idea is said to have originated from the passage in the story of Sir Walter Scott, "Anne of Geirestein," in which he says that opals are enchanted and possess evil charms.

In the Salt Lake collection are fire, black and wood opals, these latter coming from the Virgin valley and Rainbow ridge country of Nevada. Although completely opalized, the formation and coloring of the bark of the trees can be seen in this wood. There is a milky white core without fire, (the fire diminishes toward the center), then a circle of an inch or more, scintillating pin-fire, showing flame and jade, clear green, purple, blue, yellow and white colors in an opaque base. Outside of this is the brown bark where the nubs of twigs broken off plainly show, and where purple fire can be seen. This wood was deposited in volcanic ash on the shore on an ancient lake, as driftwood. It became saturated with a hot solution of silica that was precipitated from this ash. Together the silica and water replaced the wood, and this opalized wood is the result.

Opal is a solidified, but uncrystallized, mineral jelly. In opal gem stones, this jelly cracked in the process of hardening. These cracks were later filled with deposits of opal in different solution (a 6 to 10 per cent water and silica solution is needed in their formation). This variance causes the fires. The size of the cracks determines whether the fire shall be pin, harlequin or flash. Opal fire is the light that is returned to the eye after being reflected from the surface of these minute cracks, much as light is reflected from the surface of a soap bubble, broken up by interfering waves of light. The uniformity of the cracks in the opal determines the size of the fire.

Opals have been valued since antiquity. The name is said to originate from Sanscrit "upala" meaning "a precious stone." A beautiful stone was found in the tomb of Nonius, the Roman senator who submitted to exile rather than yield his opal to Anthony who coveted it for Cleopatra. Pliny called them the "burning fire of the car-



Uncut opal from Nevada.

buncle, the glorious purple of the amethyst, the sea-green of the emerald." On beautiful.

the basis of value, opals and alexandrite. The black "Flame Queen," weighing 253 carats, is three inches in diameter. It should be classed as precious, along with diamonds, rubies, sapphires and emeralds. It is the largest of all precious opals, its center blazing with crimson, carnelian, gold, and emerald, while the rim reflects deep, rich amethystine and royal blues, emerald and bottle greens, fired with gold.

The finest opal of modern times was called "Burning of Troy." Owned by the Empress Josephine, it was characterized by magnificent red flashes.

The largest one found weighs 17 ounces. A large black opal was found in Nevada in 1919. In the rough this weighed

17 ounces also. It has never been cut, and is in the U. S. national museum in the form in which it was found.

Opal exists in small deposits in cavities in rocks, sandstone seams and cracks in wood. Hungarian opal is found in fissures in decomposed lava, and is close to iron pyrites. Much opal is worthless commercially although it is beautiful with its riotous colors. Opals are always cut in cabochon, or convex, differing from the faceted cut of diamonds, rubies and emeralds. Flat pieces are cut into cameos and pendants. Orange and red pin-fire opals are of first quality commercially. The greens come next, then the blues. The grayish, or milk white ones without flash-fire, called "potch," have the least value.

Oxygen and silicon are the most common ingredients of the earth's crust, and it follows that opals should be found scattered over the earth's surface. Inasmuch as there are red, blue, purple and yellow corundums in various degrees of coloring, so there are opals showing variant colors of fire.

The oldest opal mines known are near Kaschau, in Czechoslovakia. It was from here that the stones known to the Romans were brought. These Hungarian or harlequin opals were often carried to the Orient, then returned to Europe to give them an Oriental and mystical lore. Patchy in color, and split, they were nevertheless highly valued in 19th century Europe. These fields are depleted now.

Mexican opals shared this 19th century popularity. Queretaro opals are characterized by a bronze-orange color with angry red glows piercing the milky-white layers of the ground mass. Honduras also yields opals of this color.

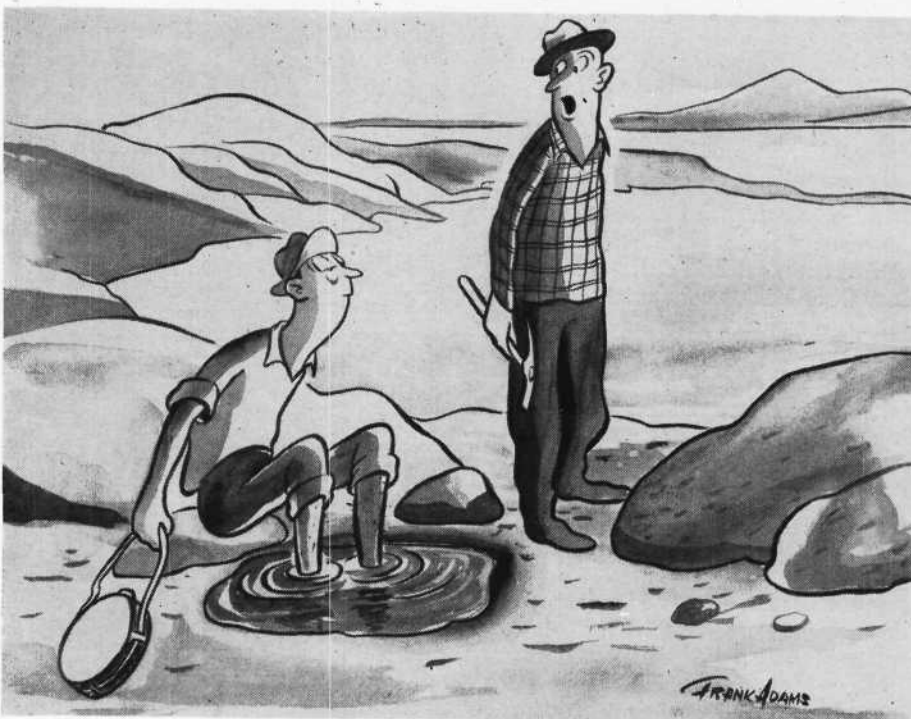
Most of today's opals come from Australia. A kangaroo hunter, in 1899, accidentally discovered this deposit in the hot desert wastes near White Cliffs, New South Wales. These opals were not unlike the Hungarian stones. The flashes were broader and the pieces larger. In this field shells of clams and other marine life, and bones of extinct animals have become opalized.

Black opals come from Queensland in New South Wales. Unlike other opals, these are notably dark in color, occurring in jasper and iron colored sandstone matrix, or mother stones, in which the gems are imbedded. Against this black background blaze the red, orange, blue, green and purple fires, like shattered fragments of a kaleidoscope.

Opals are the only gems that cannot be "made." Attempts have been made by putting a thin layer of opal between layers of glass, or a layer on the bottom to reflect the colors. Foreign material has been molded into glass. But it does not deceive the buyers. This stone, flashing blue, green, purple, red and yellow, is different from all other gems.

JALOPY JOE

By Frank Adams



"Did ya fill the canteen first?"

Mines and Mining . .

Salt Lake City . . .

A new process for the production of high grade resin concentrate from Utah coal deposits has been reported after four years of laboratory work by the Combined Metals Reduction company. The process involves application of froth flotation, from which the concentrate is leached with a volatile hydrocarbon solvent. Eastern concerns buy the concentrate for production of rubber cements, synthetic rubber, water proofing agents and printing inks.

Barstow, California . . .

Sixty tons of silica are being hauled daily from the White Cloud silica mine located 47 miles north of here between Copper City and Pilot Knob. The owners, L. R. Hopper and Karl B. McMillen of Pasadena, say they have an almost inexhaustible supply of good grade white silica. The product is being trucked to a mill at Santa Fe springs.

Washington, D. C. . . .

Secretary J. A. Krug of the Interior department, in his annual report, recommended that the federal government spend a billion dollars in compiling an inventory of the country's mineral resources. The impending shortages of important metals, he said, make it imperative that the program be expedited. Krug also expressed a preference for the leasing of mineral lands rather than outright transfer of them to private owners. Under his plan royalties would be paid to the federal treasury on wealth produced on the public domain.

Washington, D. C. . . .

Representative Clair Engle of California has introduced a bill in congress which would legalize the location of mining claims even when there is no definite showing of mineral. Under present laws a valid location can be made on the public domain only when there is "physical discovery of mineral in place." The measure provides that a claim could be held for one year while geological and geophysical prospecting was in progress.

Independence, California . . .

After a rush job of construction, the new plant of Permanente Metals corporation on the shores of Owens lake in southern Inyo county started production of soda ash in February. Brine is pumped from the lake to a million-gallon storage tank where the processes of heating, carbonization, dehydration and purification are completed in five stages. It is reported the Kaiser aluminum mill will use the product of the mill.

Beatty, Nevada . . .

Merger of three well known properties and the enlargement of a cyanide plant at Beatty acquired by a new corporation has been announced at Reno. The mines involved in the deal are Montgomery-Shoshone, Polaris and Gold Bar. M-S and Polaris are to be put on a production basis as soon as possible while prospecting for a large body of low grade ore on the Gold Bar claims will be carried out. Organized as Orion Cons. Mines corporation, the new company is headed by W. J. Loring, manager of Tonopah Belmont. The properties are in the old Bullfrog district near Rhyolite.

Salt Lake City, Utah . . .

Used during the war for the detection of submarines, a "flying doodlebug" known as a magnetometer, is to be used soon to pick up indications of mineral and petroleum deposits beneath the surface of the earth. Experiments in the use of the instrument towed by an airplane are to be conducted under the direction of Charles B. Hunt of the U. S. Geological survey's regional office in Salt Lake City. The apparatus, formerly a war secret, recently was exhibited at Salt Lake airport.

Goldfield, Nevada . . .

The old Reed mine in Talcon district 60 miles northwest of Goldfield near the California border, once a talc producer, is now yielding a considerable quantity of good silver ore, according to miners working the property.

El Centro, California . . .

The Plaster City plant of the U. S. Gypsum company, located on Highway 80 sixteen miles west of El Centro, is to be the largest gypsum processing mill in the United States when present expansion work is completed, according to company officials. Gypsum is quarried in Fish Creek mountains and transported 23 miles by narrow-gauge railroad to the plant. The company's plans include the erection of a model town on the desert adjoining the plant, for employees.

Elko, Nevada . . .

After being inactive for many years, the La Plata group of silver claims in the Cornucopia district have been acquired by Voyle H. Hazen and associates and incorporated as Agua Mineral company. According to Elko county records the mines produced \$1,253,207 following their discovery in 1872. The owners plan an extensive exploration program based on engineering reports that the claims offer favorable possibilities under proper development.

Randsburg, California . . .

After operating 24 years, the seismotite mine operated in Last Chance canyon, 15 miles west from Randsburg, as a source of material for Old Dutch Cleanser, was closed down in February. The explanation given by Manager L. J. Ratliff is that the company has found a new process for handling seismotite from its mine at Fowler, Kansas, and will use ore from that source in the future.

Farmington, New Mexico . . .

Spurred by more liberal federal leasing regulations, an intensive oil hunt is on in the Four Corners region. More than 20 companies are reported to have geological experts in the field in quest of the mother pool believed to exist here. Producing wells have been operating in the Rattlesnake and Farmington-Bloomfield areas for 25 years, but it is believed that more important oil strikes are yet to be made. At present the 250,000 square miles of possible oil lands are dotted by only 13 oil and gas producing fields.

Chloride, Arizona . . .

A body of lead-zinc ore of sufficient volume to keep its 150-ton mill in operation for five years has been encountered in the Tennessee mine near here, according to Nye A. Wimer, president of the Tennessee Schuylkill corporation. The ore was discovered during exploration work between the 900 and 1200-foot levels.

Within a few hundred yards of the Las Vegas-Beatty highway, prospectors have discovered 40 miles south of Beatty what they believe to be a large field of fine quality banded onyx.

TRUE AND FALSE ANSWERS

Questions are on page 16

- 1—True. 2—True.
- 3—False. Stalactites hang from the walls and ceiling, stalagmites protrude from the floor.
- 4—False. The San Bernardino and other mountains intervene.
- 5—True. 6—True.
- 7—False. The burro was brought to America by the Spaniards.
- 8—False. Elephant Butte dam is on the Rio Grande.
- 9—False. Colorado, not Texas, is the fourth state.
- 10—True. 11—True.
- 12—False. Hopi Katchinas are carved from wood.
- 13—True.
- 14—False. Fluorescent calcite generally shows shades of red or orange.
- 15—True. 16—True.
- 17—False. An occasional white or cream-colored ocotillo is found.
- 18—False. Much manufactured dye is now used.
- 19—True.
- 20—False. The cliff-dwellers had vacated long before the white men came West.

LETTERS...

Easter in Box Canyon . . .

Mecca, California

Dear Mr. Henderson:

We would like to call your attention to our Mecca Easter Pageant, which we gave for the first time last year, and which we plan to continue as an annual event, as it was so favorably received.

It is sponsored by the Mecca Civic Council, and is given on the evening of Good Friday at 8:30 p. m., in Box Canyon, six miles east of Mecca. The players and technicians are recruited from the entire Coachella valley, and we hope the appeal will extend farther each year. It is a religious pageant, non-sectarian, given in a beautiful canyon setting, and we believe it is beautifully costumed.

We charge no admission, and raise our funds for expenses through appeals to donors. We have no seats so far—but plenty of sand! All participants donate their services, and some materials are donated. We hope to keep it on this non-commercial level.

As this is a typical desert project, we felt that you and other desert folks would be interested in knowing about it.

This year the date will of course be April 4. We hope you will come to see it.

HELEN D. BELL

. . .

Facts About the Crater . . .

Flagstaff, Arizona

Dear Mr. Henderson:

I read the letter in the December number of Desert Magazine regarding our Arizona meteorite crater. Some of the statements would stand for some correction or modification.

Listed below are 21 well established facts regarding this great crater, for the benefit of any of your readers who would like such information.

1. Rim to rim diameter, about 4150 feet.
2. Depth to present floor from high point on rim, 570 feet.
3. Height of rim above surrounding plain, 120 to 160 feet.
4. Depth from rim to undisturbed beds or the actual crater bottom, 1200 to 1400 feet.
5. Width of collar varying from one to 1½ miles with some isolated evidences reaching out still further.
6. An abundant, but unequal, deposit of small nickel-iron fragments on the outer slope of the rim and surrounding plain to a radial distance of about 2½ miles.
7. A less abundant deposit of larger nickel-iron fragments ranging up to

1400 pounds and extending at least 5 to 7 miles radially from the center of the crater.

8. A deposit of nickel-iron oxide on the rim and surrounding plain and also in the depths of the crater pit.
9. Extensive deposits of pulverized sandstone (rock flour) in the rim and in the crater pit.
10. Deposits of a pumice-like fused rock flour within the crater pit.
11. Deposits of partially fused sandstone within the crater pit.
12. Lacustrine deposits within the crater about 90 feet in thickness.
13. Complete absence of any evidence of solfataric action.
14. Crater has been formed in horizontal beds of limestone and sandstone.
15. These beds are up-turned so as to dip away from the vertical axis of the crater to as much as 80 degrees on the east and west, less steeply on the north and still less on the south.
16. The beds of the south rim are arched from east to west as if pushed up from below.
17. Geophysical surveys have indicated considerable masses of magnetic substance in the southwestern quarter of the crater, under the south rim at the edge of the pit and still further south to a distance approximating the outer limit of the rim on that side.
18. Drilling in various parts of the pit brought up nickel-iron oxide from its depths in 17 different locations.
19. A drilling operation from the crest of the south rim not only brought up nickel-iron oxide but also encountered masses of almost impenetrable substance interspersed with ordinary rock at depths of from 1191 to 1376 feet. In this section unusually large amounts of nickel-iron oxide cuttings were recovered. Twelve out of 14 nickel tests made during this drilling operation proved positive.
20. Two drilling operations in the southwestern quarter of the pit encountered similar conditions and at depths corresponding generally with those found in the drilling from the crest of the south rim.
21. A shaft sunk from a point about 100 feet south from the crest of the south rim and carried to a depth of 745 feet found the formations badly fractured and carrying the same water level as the crater pit.

H. H. NININGER, Director
American Meteorite Museum

Chemistry on the Desert . . .

Bremerton, Washington

Dear Mr. Henderson:

I enjoyed your article about the trip down Dark canyon very much, in last month's Desert Magazine. You mentioned that the water was so muddy that it was hard to use and this recalled to mind a solution to the problem that an old desert man once told me about.

This old fellow lived most of his life in the wide open spaces as a cowboy in the days when wagon trains still crossed the continent. He said that many of these people had a terrible time trying to use muddy water and that they used to ride up to their camps and show them how to clear the water. He said that they chopped up cactus and put it in big water containers and let it stand for awhile, overnight if possible and that the water would clear right up and the mud would settle to the bottom. I don't know what kind of cactus it was, he said that wherever you find muddy water you usually find cactus. I've never tried it myself and here on Puget Sound we aren't much troubled with either muddy drinking water or cactus but I would like to know if there is anything to the theory.

DOROTHY NELSON

Desert's staff referred this question to Jerry Lauder milk, and here are the results of a series of experiments which he conducted at his Claremont laboratory:

Pulp of two different species of opuntia cacti was used in three different solutions of muddy water.

1st test: Two gallons of ordinary tap water, slightly alkaline, was muddied by adding a teacup of fine red clay.

2nd test: Same amount of water was muddied with a teacup of clay containing sand and mica.

3rd test: Same solution as in first test was made strongly alkaline by adding a tablespoon of sodium carbonate (sal soda).

The results were checked every 60 minutes for four hours, and the conclusions were as follows:

Addition of prickly pear pulp to neutral or slightly alkaline water, muddied by red clay, had a slight clearing effect, which was not much greater than the natural or un-aided clearing of the solution.

A decided but still not complete clearing action resulted in the water which had been artificially alkalized, but in this case the water became somewhat slimy.

Net result: Value of common prickly pear cactus in clearing muddy water was negligible.

Niño de la Tierra . . .

South Laguna, California

Dear Editor:

I was interested in the recent letters about "Baby Face." This is not the Jerusalem cricket or potato bug, as many believe, but could be mistaken for one of these insects. Baby-face lives down Mexico way. When we were living in El Paso, one of the weird looking bugs was found under our house. It had a body of a large Tarantula, the head was white as a bleached bone and looked like a bald headed baby, a dreadful thing. I was told at the time that Mexicans consider them so poisonous, that if bitten on the finger by one, they chop off the finger. Baby-face or Niño de la tierra, child of the earth, is found near the Mexican border.

COILA HARRIS

Conspiracy Against Tax Experts . . .

Riverside, California

Dear Mr. Henderson:

Just between you and me I wish to remonstrate about your "Just Between You and Me" in the March number. To state that I am indignant would be putting it very mildly. To give such glowing description of the Desert Cavalcade to be held in Calexico on March 13-14-15. What have the Public Accountants done to the Chamber of Commerce of Calexico that they would choose dates for a celebration on which no practicing Public Accountant can attend? It looks like rank discrimination to me. And judging by my own type of fever, those accountants who practice with a camera as well, will never forgive you and Calexico.

The only way you could have heaped additional insult on injury would have been a color insert in your magazine of some talented señorita, maybe a double page cover picture, beckoning visitors to come on. Maybe you'll do just that next year, you desert rats (and more power to you). A chained dog can only snarl at you, he can't bite you.

A Desert Cavalcade, just before the end of the tax rush! Who ever thought of such rot? "Phooey to him" my son Ralph would say.

But—Sorry I can't be with you.

HANS BOTHE

Cabbages for the Cartoonist . . .

Banning, California

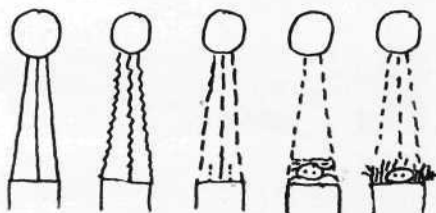
Editor, Desert Magazine:

May I ask if it is necessary to publish such a cartoon as you have on page 14 of your March issue?

If it is aimed at the persons that come out on the desert to view what your magazine extolls, it seems to me that you are classing them as the lowest of morons.

To me it has neither sense, wit, nor humor.

JIM PIERCE



Symbols of the sun.

Glyphs of the Ancients . . .

Beaumont, California

Dear Mr. Henderson:

In looking over the February issue of the Desert Magazine, I was very much interested in your fine article on "Palms of Palomar," especially in the central photograph at the head of page 19, noting the "chalked in" glyph.

Dr. Guy Bogart and I have been reading Col. James Churchward's "The Lost Continent of Mu" and noted the similarity between the Palomar canyon glyph and the symbols shown on page 22 of Colonel Churchward's book. I am enclosing a rough sketch of five of the symbols, in case you do not have the book.

These vignettes were used as a key to the ancient Naatal writings of India and Burma concerning the creation, and it would seem that you have discovered another link in the history of Mu and Atlantis.

T. J. HOUSEKEEPER

Ran the Rapids in a Scow . . .

Sulphur, Nevada

Dear Sir:

Ordinarily I do not write letters to the editor, but your article on your trip down Dark canyon causes me to step out of my usual role.

I came down the Colorado past the mouth of Dark canyon in October, 1945, on a prospecting trip which ended at Hite, Utah. I built a 7x14 foot scow just a mile below where Major Powell started his expedition. As the river was low and slow it took 41½ hours actual running time to reach Green river.

From there on things livened up, but fortunately I got all the breaks and by the time I got to Dark canyon I realized there was nothing to my theories of finding gold-bearing sediment in that part of the river so I unloaded some of my equipment to lighten my load.

There was clear water running in Dark canyon at the time and I camped there five days to try to patch up my scow which had been damaged when a surge of white water dragged the boat across the top of a large flat rock.

The cache of food you mentioned in your story as being under an overhang above the mouth of Dark canyon is probably that which I left there. I also left a sheet-iron stove and stove pipe.

I would like to correct a statement you made that Dark canyon marks the last rough water in Cataract canyon of the Colorado. Just before the river makes a sharp bend to the right, a half mile below Dark canyon tributary my scow went bumpy-bump like a springless wagon on cobblestones. Six or seven miles further down I came to the noisiest rapid along my entire trip. I either had to unload and portage my supplies around or take a chance.

I was impatient to complete my trip, and after tossing a few sticks into the current to get the drift or surge of the water, I cast off and made it through without grief.

I've taken a lot of space just to tell you that the cache of food near the mouth of Dark canyon is probably the surplus I left there under the overhang.

WM. HERWIG

The Meat is Edible—if You Like It . . .

Coachella, California

Dear Sirs:

I wish to know where a man can sell some live rattlesnakes. I have too many of 'em.

SAM KAPLAR

Keeping History Straight . . .

Rowood, Arizona

Dear Mr. Henderson:

Please excuse me for trying to correct you as to the name of Arizona City. That is where I was born. It was not named after Ehrenberg. Arizona City was the town where Yuma now is. At that time Yuma was across the river in California and was called Fort Yuma.

Arizona City sprang up shortly after the Gadsden Purchase. Gila City sprang up where the town of Dome now is. La Paz was the county seat of Yuma county, but later was moved to Yuma.

Along about 1872 or 73 they had an election and a lot of money was bet on the outcome. The election returns from up the river were to be brought in to Yuma by horseback, but the gamblers became impatient to know the result and sent an Indian runner out to find out how the votes were cast. He brought the results in several hours ahead of the horseman.

A man named David Near ran a large store in Yuma. He told me that a little steamboat used to carry the mail up the river to Picacho, Ehrenberg and La Paz. But when they were in a hurry they would send an Indian runner, who always beat the boat.

It is hard to get correct facts about history long gone by, and I am glad to give you this information.

THOMAS CHILDS

Dear Tom: You are right, and Desert erred. Ehrenberg formerly was called Colorado City, not Arizona City.—R.H.

HERE AND THERE... on the Desert

ARIZONA

Two Thousand Miles of Fence . . .

NOGALES — Southwestern congressmen have introduced bills to provide for construction of 2000-mile fence along Mexican border from Pacific to Gulf of Mexico. Bills would authorize expenditure of \$2,600,000 for project during 1947-48, including obtaining rights of way up to 60 feet wide. Fence, according to sponsors, would keep Mexican cattle, infected with hoof and mouth disease, from crossing border, and tighten up immigration and customs control.

New City Planned . . .

TUCSON—If plans of some 2000 veterans mature, a new city may rise on site of Marana army airbase near Tucson. Representatives of group have approached Robert O. Kelly, state surplus property purchasing agent, desiring to purchase entire base. Veterans will attempt to induce some large, nation-wide industry to set up assembly plant at field and afford employment for residents. City will be named Truman, Arizona.

Motorboats for Colorado Arrive . . .

FLAGSTAFF—Two cabin motorboats to be used in exploration work on Glen canyon dam project were unloaded at Flagstaff late in January and hauled by trailer to Lee's ferry on Colorado river. The 28-foot boats have flat bottoms for river use. Bert Lucas is engineer in charge of preliminary surveys. Party has been camped at ferry for three months, compiling data for dam project.

Havasupai Second Chief Dies . . .

GRAND CANYON — Chief Watahomigie, of the Havasupai tribe, died on February 12 near Pasture wash. Official records gave date of his birth as 1855. Tribe traditionally has had two chiefs, one looking after defense and the other pastoral and daily life matters. Chief Watahomigie was Second Chief. He was a member of seven-man tribal council for many years. Chief was famed among his people as deer hunter and horseman. Havasupai reservation, created in 1880, is entirely within boundaries of Grand Canyon national park. Indians spend summers cul-

tivating 500 acres of gardens along Havasu creek. In winter they move up to south rim of Grand Canyon, where fuel is available.

Papago Minister Ordained . . .

SELLS — Reverend Joaquin Lopez, first Papago Indian to be ordained, has been installed as pastor of Indian Presbyterian church at Vamori village, 20 miles south of Sells. Five hundred persons attended ceremonies. Reverend Lopez was missionary at the church for 20 years. Once during that period he built by hand 20 miles of road, so that he could bring religion to a remote village. His present congregation numbers 40, but he also preaches at 10 scattered villages.

Tall Grass on the Desert? . . .

AJO—Tall grass may grow on the deserts of the West, as a result of experiments being conducted by the Indian service. Congress provided funds for reseeding 50,000 acres. Method of seeding 10,000 acres on Papago reservation was developed by Dr. Lytle S. Adams. Seed was mixed with clay to form little pellets and fertilizer and rodent repellent was impregnated in clay. Pellets were dropped by airplane, lying dormant until the rains came. Lehmann Love grass, from North Africa, and sand drop seed, a native grass, were used. Wheat grass was seeded on 20,000 acres on San Carlos reservation and on like area on Hopi reservation.

Nearly 11,000 persons paid \$13,841 in 1946 to see Colossal cave, 27 miles southeast of Tucson. Cave, owned by Pima county, was supposed to have been discovered by wagon-train bandits in pioneer times.

More than 6,350,000 persons entered or left United States through boundary gates at Nogales during 1946, according to Herbert Nice, immigration chief inspector.

Sum of \$400,000 has been allotted by forest highway board for construction of additional 12 miles of Williams-Grand Canyon road.

Border city of Agua Prieta, across the line from Douglas, will be made a free port. Tijuana and Mexicali are other cities enjoying free importations of many classes of merchandise. Agua Prieta's request was granted because of town's isolation from interior of Mexico.

CALIFORNIA

Oldtimers Gone from Randsburg . . .

RANDBURG—Ray Prewett and his dog Spud, oldtimers at Red Mountain, are gone. Prewett prospected Rand district at various times from 1908 until he entered sanitarium at Colfax, California, in August, 1946. Spud, when he was hungry, would carry a small bowl in his mouth for



Capture the Rainbow

IN 1947

... take the thrilling trip on mule back down Rainbow Trail 'mid colorful scenes so vivid no artist could portray . . . to the most spectacular of all national monuments . . . RAINBOW BRIDGE. Rest at picturesque RAINBOW LODGE, backed by the breathtaking span of Navajo Mountain . . . where comfortable lodging, excellent food and hospitality are, as before, directed by Bill and Mrs. Wilson.

WRITE BILL WILSON, TONALEA, ARIZONA, FOR RATES AND A BROCHURE DESCRIBING "THE RAINBOW."

cash contributions, then retire to kitchen of a cafe where he purchased his own meal. When Prewett entered the sanitarium, the dog refused to eat. He was shipped back to Red Mountain in the hope that he would take a new interest in life. Prewett passed away on January 30. Spud, a one-man dog, had already died on December 12.

Flying Boat Likes Desert . . .

MECCA—A Catalina flying boat, attempting to reach base at San Diego after being marooned four months in an Arizona mountain lake, was forced by engine trouble to land on the Salton Sea. Last October engine trouble caused big craft to land on Carl Pleasant lake north of Phoenix. Before repairs could be completed, dwindling water trapped ship. Increased water from melting snows made possible a hazardous takeoff from the lake a short time before craft again was grounded.

All-American Canal Changes Hands

EL CENTRO—Imperial Irrigation district has received formal notice from Secretary of Interior Krug that the portion of All-American canal between Pilot Knob and Coachella branch has been completed. District immediately will assume responsibility for care, operation and maintenance of this section of canal. District President Evan T. Hewes was instructed by board to make arrangements for physical transfer of canal, which was expected to be made within 60 days.

Revolt in the Desert . . .

TWENTYNINE PALMS—Representatives of San Bernardino county desert communities met at Twentynine Palms to formally open drive planned at changing supervisorial districts in county to give more representation to desert areas. Needles representatives charged that county collects \$150,000 a year from their area and sometimes spends back as little as \$5000 from same funds. Present supervisorial district is largest in county, including a corner of the city of San Bernardino and running to the Colorado river. Needles and Barstow have been active in attempts to create a new county which would embrace the desert section.

Death Valley Road Approved . . .

TRONA—Road improvement program from Trona to Death Valley has received all necessary official approval and survey work will be started within 60 days, according to S. W. Lowden, district highway engineer. Work, to cost \$285,000, probably will be completed within a year. Surfaced road will run from Westend quarry across Slate range to Monument entrance in Wildrose canyon.

Cattle Can't Take It . . .

EL CENTRO—Body temperatures of dairy cattle increase, respiration rates double and milk production decreases as much as 23 per cent in one month when

hot weather comes to Coachella and Imperial valleys. Investigations made by N. R. Ittner at University of California Agricultural Experiment station east of El Centro show that Holstein cows react in proportion to black coloring in their skin and are affected more than Jerseys or Guernseys. Brahman cattle are much less affected by heat than native stock and major point of investigation is determination of minimum amount of Brahman blood necessary for adaption to desert heat. Beef cows do well during first summer, but do not shed next spring and have dry, bleached, rough coats as long as they stay in the area.

Rockhounds and other persons having business in Camp Irwin Military reservation, near Barstow, should apply direct to Lt. Clifford S. Stillman, stationed at camp, for permission to enter the government property.

Barstow *Printer-Review* reports that desert burros, who kept discreetly out of sight during meat shortage, are again galloping up to greet tourists who stop their cars.

Barstow chamber of commerce reports that Doran drive in the Calico mountains and the Rainbow basin road are in good condition.

HAVE RECENTLY IMPORTED A LIMITED QUANTITY OF GENUINE, LONG LINGERING EXQUISITELY FRAGRANT . . .

FRENCH PERFUMES

MADE FROM THE PUREST ESSENCES OF THE LOVELIEST FLOWERS GROWN AT GRASSE (the garden of France; my native Country).

I would be pleased to mail you a half ounce bottle for \$5.00. (Complete satisfaction or money refund.)

Men too are delighted with this tenacious odor in their personal attire!

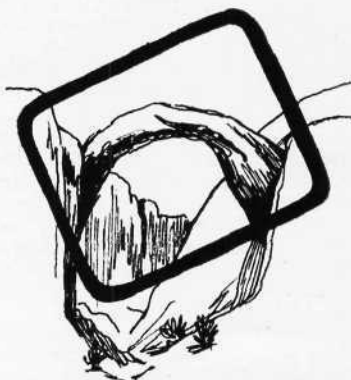
Send Postal Note or M.O. (No C.O.D.) to:

L. de CRISSEY

P. O. Box 93, Times Square Station
NEW YORK 18, N. Y.

Coachella Canal Link Contracted . . .

INDIO—Construction of another link of main Coachella canal is scheduled to begin under contract awarded Otto A. Ashbash and Sons, St. Paul firm. Only 21½ miles of canal remain to be contracted for, and work is progressing, or has been completed on 115½ miles. Coachella canal will furnish Colorado river water for irrigation of 75,000 acres of date, grape, grapefruit and winter garden land on the Colorado desert.



"CANYON COUNTRY"

12 full-color 35 mm. transparencies depicting the Grand Canyon Country from the rim and river; places seldom seen by the tourist, but easily reached. Transparencies set in sturdy cardboard ready for viewing. Twelve views, 5.85, postage included.

DESERT FILMS

31 N. 1st Street
Phoenix, Arizona

Desert Queen Date Gardens

Four Miles South of Thermal, California

For Sale

A Fine Set-Up for a Fancy Pack Deal. Pack Your Own Dates and You Can Clear This Garden in Two Years.

15 acres in Dates, 35 acres in Vegetables, 2 acres Grapes, ½ mile landing strip, plenty of water. Enough farm implements for two farms including new tractor. Packing shed for dates and one for vegetables. Owner's house located in large grove of beautiful shade trees. 2 help houses, fumigation and storage houses.

Garden is in first class shape, cleaned and ready to start pollinating at this date.

\$25,000 down, easy terms on balance of \$25,000 if desired. Owner selling to go into business of raising sub-tropical fruits.

JACK BYRD, Owner Box 155, Rt. 1, Thermal, California

THE DESERT TRADING POST

Classified advertising in this section costs 7 cents a word, \$1.00 minimum per issue

INDIAN GOODS

WE ARE AGAIN RECEIVING real hand-hammered Indian jewelry from the reservation all made by top silversmiths. For our rock customers we have bought another collection of rock, making this one of the largest collections of rocks and minerals in this part of the country. Our collection of rugs, baskets and jewelry is still large despite the shortage. Come in and see us. Daniels Indian Trading Post, 401 W. Foothill Blvd., Fontana, Calif.

4 VERY FINE ancient Indian Arrowheads \$1.00. 4 tiny perfect bird arrowheads \$1.00. 1 Ancient Stone Tomahawk \$1.00. 2 Flint Skinning Knives \$1.00. 1 Large Flint Hoe \$1.00. 2 Spearheads \$1.00. 10 Arrowheads from 10 states \$1.00. 20 Damaged Arrowheads \$1.00. 10 Fish Scales \$1.00. 10 Hide Scrapers \$1.00. 4 Perfect Saw edged arrowheads \$1.00. The above 11 offers \$10.00 Postpaid. List free. Lear's, Box 569, Galveston, Texas.

FOR SALE: Stock and equipment of Indian Trading Post at Jacumba, Calif. At invoice. Address Mrs. K. B. McMahan, Box 41, Jacumba, Calif.

INDIAN MOCCASINS—Sheepskin lined in beige and desert gold. Made of elk hide, Sizes 3 to 9. Send prepaid anywhere in United States \$6.95, check or money order only. House of O'Brien's, Route 1, Box 65, La Quinta, Indio, Calif.

BOOKS — MAGAZINES

BOOKFINDERS! (Scarce, out-of-print, unusual books). Supplied promptly. Send wants. Clifton, Box 1377d, Beverly Hills, Calif.

READERS SAY it's "Down to Earth." That's why they like Desert Spotlight, the new illustrated magazine of the California desert areas. Send \$1.00 for 6 months trial subscription to Desert Spotlight, Box 162, Yucca Valley, Calif.

CAMP AND TRAIL INCIDENTS OF PIONEER LIFE, by W. I. Irvn Lively. A desert book by a desert author, who has lived for fifty years in the Southwest. It has the real tang of the Desert. If you like poetry, you will like it; if you do not like poetry you will read it and forget that it is poetry as you become absorbed in its narrative and descriptive thrills. \$1.50 postpaid. Address W. I. Lively, Route 6, Box 1111, Phoenix, Ariz.

COLLECTORS the world over read The Earth Science Digest. If you like earth science, you will like The Earth Science Digest. One year subscription, \$2.00 — Sample copy 25c. Write: Dept. D., Box 57, Omaha 3, Nebraska.

EXCLUSIVE outdoor magazine. Chocked, crammed with outdoor lore. Life outdoors, minerals, furs. Just \$1.00 year, 35c copy. Wildcrafters World Magazine, Rt. 1-D, Alton Sta., Ky.

TEN YEARS of National Geographics, complete with indexes. June 1936 to July 1946. Like new. Must sell this month. Make offer. F.O.B. Stockton. H. Dacquet, 1605 W. Monterey St., Stockton, Calif.

BACK-DATE MAGAZINES, books. Send wants. Arkell's, Tarzana, California.

WATER SUPPLY PAPERS, all U.S.A., Oil Reports, Engineering and Material books, etc. Send wants, Jack Hellar, P. O. Box 2507, Los Angeles 53, Calif.

ONE ONLY—Complete set of Desert Magazine, from Vol. 1 No. 1 to and including Vol. 9 No. 12, in perfect condition, including binders. Nine complete volumes for only \$40.00 prepaid. H. B. Hunt, 313 No. Washington Ave., Whittier, Calif.

MISCELLANEOUS

KARAKULS. Producers of Persian Lamb fur are easy to raise and adapted to the desert which is their native home. For further information write Addis Kelley, 4637 E. 52 place, Maywood, California.

SWAP \$500.00 COLLECTION rare Mexican Opal Cabochons; Watches; Printing, Mimeographing; Gems; for Guns; Electric Motors, Fans; Lapidary Equipment; Cutting Materials; Gems; Hobby-Collections; Relics; Ammunition. Desert Bazaar, Box 503, Calexico, Calif.

PANNING GOLD—A side line hobby for Rockhounds and Desert Nomads. You should know how to pan gold, recognize gold bearing gravel and valuable quartz ledges. The places you go are where rich virgin ground is found. Send your name for new folder on panning gold, with pictures—list of mining books and equipment for prospector beginners. Old Prospector, Box 21A59, Dutch Flat, Calif.

ROCKHOUNDS! Build an Outdoorsman's Work-buggy. Carries all equipment. Gets to those out-of-the-way places. Handiest rig you ever used. Illustrated manual with descriptive diagrams, only \$1.00. Wildcrafters World Magazine, Rt. 1-D, Alton Sta., Ky.

THANKS to subscribers of Desert Magazine who sent for Pelican Joe's instructions for fish seasoning and quick smoke method. Others who are interested try this menu with your friends. Burgundy, hot smoked fish, baked potatoes, sour red cabbage, salad, desert. Full instructions how to smoke and season fish \$1.00. Free sample smoked fish if instructions ordered before May 1. Pelican Joe, 6456 Atkins St., Encanto, Calif. Box 332.

FOR SALE: Redwood doors with antique hardware, Pioneer trunks, framed pictures, books, prints, lithographs, etc., unusual antiques, twelve hundred flower pots, all sizes, palms, all sizes for transplanting, Pioneer and Gay 90's costumes. Write P. O. Box 790, Redlands, Calif.

FORCED TO SELL: About twenty head of top quality registered Karakul Ewes at a bargain. These sheep are now located at the Karakul Fur Farm. For details, write N. C. Montague, Versailles, Ky.

HAND WROUGHT COPPER, in all types of metal arts for the home. Many desert gems cut and polished or rough. Inlays for the fireplace and barbecue. Send for a list of our special items. Valley Crafts Shop, 14135 Oxnard St., Van Nuys, Calif.

CACTI AND SUCCULENTS—From the deserts of the world. Don-Rita brand. By appointment only. Write us your needs and we will try to help you. Michael Donnelly Cacti Gardens, 334 Lowell St., Daly City, Calif.

FOSSILS—Geological supplies, Geiger counters, thin sections, picks, hammers, etc. Omaha Scientific Supply Co., Box 1750, Omaha 4, Nebraska.

"PERRY DRILL"—New all-steel. Drills 1/4" agate in 5 min. Usable for drilling plastic wood, iron, gemstones. None better at any price. Only \$17.50. L. E. Perry, 111 N. Chester, Pasadena 4, Calif.

LEARN the profitable jewelry and gold-smithing trade at home. Simplified course teaches jewelry designing, manufacture and repairing; gemsetting, etc. Gemcrafters, Dept. F, Kalispell, Mont.

ARTCRAFT SUPPLIES—Silver, copper, leather, findings, books, and tools. Prest-o-lite, RX lapidary machines, and mineralights. Handbook of U. S. Coins—60 cents, coin albums or cards—30 cents. Gold coins wanted. Will consider selling half or all of business to reliable mineralogist, lapidist, or silver-smith. The Silver Mine, 5622 York Blvd., Los Angeles 42, California.

KODACHROMES OF THE SCENIC WEST—Death Valley, Sunrise from Zabriski Point; Yosemite, The Firefall, Chief Lemee, Moonrise from Glacier Point; Grand Canyon, Deer on rim, sunset from El Tovar; Grand Tetons, view from the summit of the Grand Teton; Yellowstone, Buffalo; Glacier, Mountain Goat. Also many other slides of the above parks and of Canyon de Chelly, Aztec Ruins, Frijoles Canyon, Zion, Lassen, Kings Canyon, Yosemite High Sierra, and New Mexico. Any slide listed above and catalogue for 50c. Douglas Whiteside, Best's Studio, Yosemite, California.

WANTED: Old Envelopes with western cancellations, early California mail before 1890. Write: C. H. Greiner, 106 N. Sunset, Temple City, Calif.

THE PERRY "PRECISION" 8 inch Re-saw diamond saw. Fast cutting, all steel, dbl. ball bearing, strong, true running, 9x13" table. None better. \$27.50. L. E. Perry, 111 N. Chester, Pasadena 4, Calif.

REAL ESTATE

THE COLORADO GEM CO. for Sale. Well established gem business for sale to right people. Store building completely equipped with display cases, counters, etc. Large stock of everything in this line. Modern living quarters in same building. Steam heat, electricity and water. Extra cabin all on three lots. Reason for selling—death of wife and failing eyesight. Will remain here to assist in the development of Gem Village. Details furnished to those really interested. Frank Morse, Bayfield, Colo.

FOR SALE: Photo Shop and Studio on desert. Fully equipt. Doing nice business. Well arranged. Large work rooms. Ideal location for agate and desert crafts. Owner wishes to pursue other activities. Write R. J. Wilson, 114 Spruce, Deming, New Mexico.

DESERT ESTATES—5 acres or 500—Just south of Desert Hot Springs—9 miles north of Palm Springs. In beautiful Garnet Valley. R. H. McDonald, Box 21, Desert Hot Springs, California.

NEW HOUSE and 1¼ acres, good soil, on highway, fruit trees and shade, 3 wells, 1½ miles from city limits. Suitable for Trailer camp or other business. Full price \$6950, will take some Desert land in trade. Cal Black, Box 836, Redding, Calif.

NORTHERN NEW MEXICO 97 degrees warm Mineral Water Springs flowing better than 1000 gallons per minute; 55 acres with native timber area and Mountain Stream in beautiful Mountain Valley. Ideal for Rest Home or Sanitarium. \$10,000.00. P. O. Box 427, Hot Springs, N. M.

FOR SALE: The Chaffin Ranch. On the Colorado River. The most beautifully isolated ranch in the West. Shown on maps as: HITE, Utah. A new ferry opened there Sept. 1946, connecting Richfield & Blanding. Contains about 274 acres. The ranch can become a townsite. Exactly \$35,000 for Ranch and Ferry. Arthur L. Chaffin, Johnston Hotel, Richfield, Utah.

For Imperial Valley Farms—

W. E. HANCOCK

"The Farm Land Man"

Since 1914

EL CENTRO — — — CALIFORNIA

NEVADA

Davis Dam on Schedule . . .

DAVIS DAM—After less than a year of operation at the Colorado river damsite, first phase of construction of Davis dam is nearly complete. It included excavation of diversion channel and foundations for power plant and spillway. Utah Construction company, project contractor, planned to start pouring concrete on February 15. Since last September, workmen have excavated daily average of 10,500 cubic yards of rock and earth and have built concrete mixing plant capable of turning out 500,000 yards necessary for construction. If present rate of progress continues, power will be delivered from dam by the latter part of 1949.

Will Recut Colorado Channels . . .

BOULDER CITY—Bids have been called for construction of a huge dredge to be used to provide new channel sections for Colorado river below Boulder Dam. Dredging is necessary due to change of gradient of the river's bed, as a result of regulated silt-free flow of water after construction of the dam. Silt has raised river bed several feet between Needles and Topock, causing river to spread over a large area. Dredge, which will take about a year to complete, will cut a new channel in this section and later will be used in the Cibola valley farther south.

Cave-In at Virginia City . . .

VIRGINIA CITY—Traffic through Virginia City was disrupted when a section of C street collapsed. Cave-in measured 15 feet long, 10 wide and about 15 deep, blocking half of main thoroughfare. Entire city is undermined by 500 miles of old workings, and land slippage and cave-ins are common.

State May Buy Basic Magnesium . . .

CARSON CITY—Proposals that state of Nevada take over Basic Magnesium properties at Henderson and Gabbs, and finance construction of generator at Boulder Dam to furnish power for the plants, were advanced at meetings of state legislature. Senator Pat McCarran told finance committees that transfer of Basic Magnesium from War Assets administration to state was not only possible, but essential. Governor Vail Pittman proposed that a generator capable of producing 85,000 kilowatts annually be built at Boulder Dam for exclusive use of Nevada. State now has 40,000 kilowatts as its share of dam power, and has obtained another 35,000 kilowatts from Southern California Edison company on lease basis. Cost of building generator and its installation might run as high as \$7,000,000, legislators were informed.

Railroad Off Again, on Again . . .

TONOPAH—Although interstate commerce commission granted Tonopah and Goldfield railroad company permission to abandon its road between Mina and Goldfield, Nevada public service commission has issued an order denying company right to do so. The Nevada commission has asked interstate group to reverse its ruling, charging that railroad owners profited heavily during war and now want to sell railroad as junk while prices are at maximum. Railroad officials say they will resort to courts to prevent Nevada commission taking further action and commission plans to obtain injunction halting attempts to abandon the road.

A postoffice will be established at Davis dam, on Nevada side of the Colorado river, to facilitate delivery of mail to persons residing at construction camp there.

Tourists spent approximately \$36,000,000 in Nevada during 1946. There were 4,267,000 out-of-state trips made on Nevada roads during period.

Early risers saw the Aurora Borealis spread across skies north of Goldfield at 3:30 on morning of February 21. Its multi-colored hue assumed a waving appearance interspersed with streams of green, yellow and red lights.

NEW MEXICO

Penitentes Granted Blessing . . .

SANTA FE—Archbishop Edwin V. Byrne has granted Catholic church's blessing to the Association of Hermanos de Nuestro Señor Jesus Nazareno—commonly known as the Penitentes. Declaring that Miguel Archibeque and leaders of Hermanos have acted to rid them of excesses, archbishop of Santa Fe has given Penitentes protection of the church, "if the Brethren proceed with moderation and privately

under our supervision." It is largely through this group that the faith was preserved in New Mexico when, at beginning of nineteenth century, Franciscan fathers were removed by order of new government of Mexico, according to the archbishop.

THE HOTEL AT THE PALMS

FIREPLACE—
ADOBES

ALL SPORTS

OPEN
ALL YEAR



Gateway to Joshua Tree Monument

ROBT. VAN LAHR, Mgr.

For reservations write or call at
29 Palms Inn, Twentynine Palms, Calif.

or Call any Travel Bureau or Automobile Club

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GENUINE STEERHIDE HUARACHES

THE SANDALS
THAT MADE MEXICO FAMOUS
ARE HERE AGAIN

Carefully handcrafted from finest natural beige cowhide to give you the same cool comfort, the same rugged wear as of old. Send us your foot outline, or mention shoe size. We'll send you the best looking huaraches you ever saw by return mail, and guaranteed to fit.

\$3.65
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Sizes for everyone—
Men's sizes 8 and larger \$3.95
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Please send _____ pairs Huaraches
Foot outlines enclosed, sizes _____
Name _____
Address _____

The **OLD MEXICO SHOP**
D SANTA FE, NEW MEXICO

Stage Station Torn Down . . .

GALLUP—Gallup's oldest landmark has disappeared, with the tearing down of the old Overland stage station to make way for a modern apartment building. Rock and mud walls of little structure were three feet thick, and it was built with two wooden roofs with a center layer of eight inches of sand. Heavy window frames and roof beams still showed marks of bullets dating from explosive 70's and 80's. Workmen tearing structure down, found log beam 35 feet in length and 14 inches square, hand hewn, and a newspaper printed in 1870. Old station well is now under Highway 66.

MORRIS PORTABLE Combination VIBRATING BLOCK MACHINE - For ELECTRIC or ENGINE DRIVE
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many different molds (30plus)
make block for your own use,
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SoCalif & Mexico 1635 Landa St., Los Angeles 26
usually pays out-including pallets-
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"EVERYTHING FOR THE HIKER"

SLEEPING BAGS
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Keep your copies of DESERT MAGAZINE in Loose Leaf Binders!

These gold-embossed binders are made especially for Desert readers. Magazines are quickly inserted, and they open flat for easy reference.

Each binder has space for a year's copies. Mailed to you postpaid for . . .

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THE *Desert* MAGAZINE
El Centro, California

Rescue in the Desert . . .

DEMING—When a P-47, flown by a Bolivian pilot, crashed 25 miles southwest of Deming, two Civil Air Patrol members flying a light plane saw burning wreckage and pilot stretched out beside his parachute. Fliers, Wayne Champney and Fred C. Smith, managed to make a landing on the rough, mesquite grown terrain. Bolivian pilot, hit by his plane when he jumped, had both legs and one arm broken. Champney and Smith radioed their information to Biggs field, chopped away enough brush to take off and got into the air again with their injured passenger. He was rushed to Beaumont General hospital in serious condition.

Navajo Schools Crowded . . .

GALLUP—More Navajo children now are in schools than at any previous time. Dr. George Boyce, director of Navajo education announces. Despite this fact, 14,000, between ages of 6 and 16, are not attending schools. All government reservation schools, except eight in need of repairs and equipment, are open and in use. Leupp and Tohatchi schools are shut down and schools at Shiprock and Chinle are operating at half capacity due to equipment shortages. It would take \$50,000,000 to provide all schools necessary for the Navajo, according to Dr. Boyce.

Peyote Causes Division . . .

ALBUQUERQUE—Navajo on the reservation are divided on use of the mild narcotic, peyote, in religious rites, Assistant U. S. Attorney Maurice Sanchez reported. Three Navajo, arrested by tribal police for chewing the peyote button, plan to complain to tribal council. The three charge

that Indians opposed to peyote broke into a religious meeting in a reservation hogan and a fight followed as worshippers sought to eject them. Sanchez said that officials of the Navajo central agency at Window Rock told him use of peyote in ceremonies would be protected.

Indian Vote Debate Grows . . .

SANTA FE—Debate on proposal to give New Mexico Indians right to vote is growing more intense. Interior Secretary Krug telegraphed Governor Mabry, urging adoption of the constitutional amendment now before legislature. Mabry countered with suggestion that Krug urge congress to release Indians from their guardianship and give them full status of citizenship, which would automatically permit them to vote in New Mexico. Washington, said the governor, talks a lot but does little for the New Mexico Indian. Indians themselves are split on vote proposal, those urging adoption and rejection appearing before legislative committee.

Holy Cross hospital at Taos observed tenth anniversary of its founding on February 2. Hospital was established through efforts of Mabel Dodge Luhan.

Sidney Ferrel, disabled veteran, and his wife, who started in a covered wagon from Denver last August, completed their journey at Hot Springs on February 4.

Albuquerque, faced with possible flood threat a month ago, was warned that it may be entering most prolonged drouth in its history. Snow in Cumbres Pass, Colorado, area, where Rio Grande floods are born, is far below normal.

BY BOAT into the heart of the Southwest's most scenic canyon country with **Norman Nevills**

A limited number of reservations are now being made for the 1947 Nevills expeditions down the San Juan and Colorado rivers—191 miles in seven days. Special-built river boats, skilled boatmen, good food and sleeping bags for all passengers.

Boats start from Mexican Hat, Utah, on the San Juan, and complete the trip at Lee's Ferry on the Colorado. Arrangements will be made to have your car driven from Mexican Hat to Lee's Ferry. Sidetrips include:

Crossing of the Fathers, Music Temple, Mystery, Twilight and Hidden Passage Canyons, Outlaw Cave and the famous Rainbow Bridge

Sailings May 1, 10, 19, 28—June 6, 1947

For schedules and rates write to . . .

NORMAN NEVILLS — — — — BLUFF, UTAH

" . . . A river trip with Norman Nevills is more than a mere boat ride. It is a flight on a magic carpet of adventure into a canyon wilderness of indescribable beauty and grandeur."

—DESERT MAGAZINE

UTAH

Son of Chief Posey Dies . . .

BLANDING—Jess Posey, oldest son of warlike Chief Posey, died at his winter camp 10 miles south of Blanding on January 27. Jess, who was 65, was recognized as an honorable, law-abiding man. He lived a quiet life on his ranch in Allan canyon, growing crops and caring for his livestock. Main subsistence was his flock of sheep which he had near him at his camp on lower White Mesa when he died. Posey's father caused long years of trouble in San Juan county. In the big fight at Bluff in 1915, Old Posey shot an officer and took a leading part in struggle which culminated in assignment of Gen. Hugh L. Scott to induce Indians to surrender. Chief Posey was killed in uprising which he started in 1923.

Steel Company Bids for Town . . .

DRAGERTON—Geneva Steel company, with offer of \$1,553,000, made highest substantial bid for purchase of this coal mining community now owned by the government. Company would operate town and utilities and lease homes to employes, as means of securing sufficient miners to work Horse canyon coal mine. It would turn school over to school district for \$1, upon assurance of maintenance, and church, hospital and clinic to responsible groups for a similar figure. Fire department and sewage system would be conveyed to a municipal corporation. Second bid was by a cooperative community group. Highest bid of \$5,550,000 by a Maryland company was deemed an error as government investment in the plant is estimated at \$4,500,000. Low bid, by a woman in Indiana, was \$5.

Pioneers Didn't Have This . . .

SALT LAKE CITY—Pioneer delicacies that Brigham Young and the early Mormons never dreamed of will be served during Sons of Utah Pioneers centennial trek from Nauvoo, Illinois, to Salt Lake City next July. Elk and antelope meats are already in storage and attempts are being made to secure bear and buffalo steaks. J. W. R. Robinson, chef for trip, declares that beans, mutton and beef were most common foods on first journey. With refrigerated truck and modern kitchen, Robinson hopes to improve on this menu. Original pioneer trail will be followed as nearly as possible for trip with same number as first group—143 men, 3 women and 2 children—traveling by car instead of covered wagon.

Historical Society Wants Building . . .

SALT LAKE CITY—Utah State Historical society has requested a building where archives, paintings, books and other historical data can be preserved for future generations. Society has requested funds for such a building in 1903 and 1919, but

without success. Biennial report of organization pointed out that law gave it official status in 1917 and empowered it to collect and preserve city, county and government records. But not until 1937 did an appropriation permit society to hire a full-time secretary. In the last ten years, society's library has grown from six to more than a thousand volumes, and other collections proportionately.

No Soap Shortage Here . . .

SALT LAKE CITY—There is no soap shortage in welfare program of Church of Jesus Christ of the Latter-day Saints. Church operates its own soap factory in Salt Lake City. Production for 1947 is to exceed 120,000 pounds of soap powder, 60,000 half-pound bars of laundry soap, 30,000 cakes of toilet soap, 12,000 pounds of scouring powder and 12,000 pounds of water softener. All soap manufactured goes into Mormon cooperative welfare program. Workers in plant receive credit cards in lieu of wages. Cards permit them to draw needed commodities from the welfare storehouse.

Mrs. Clarrie Amelia Web Stark, 97, who, with her late husband, John Daniel Stark, served as first telegraph operators in Salt Lake City, died in Baker, Oregon, February 17. Mrs. Stark was telegraph operator in office of Brigham Young when she was 16, and her husband was commissioned by Young to teach telegraphy.

Action of the United States Supreme Court has cleared way for return of Denver and Rio Grande Western railroad, in receivership for 12 years, to private ownership.

Murals in the state capitol building, depicting arrival of first party of emigrants in Salt Lake basin are admirably suited for reproduction on the Utah centennial stamp, according to information received from post office department.

Mrs. Anna E. Higgs Clayton Jensen, 93, who crossed the plains with the original company of handcart pioneers in 1856, died in Mayfield, in January.

GOOD WIRING PAYS

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AMATEUR GEM CUTTER

By LELANDE QUICK

There are two important events scheduled for the amateur lapidary. We believe that this year, with new cars and plenty of gasoline available, they will break all attendance records. One is in Northern California and one is in Southern California so that all California lapidaries particularly should get to see one of them.

The first event is in Northern California when the San Jose Lapidary society will hold its second annual gem show in the California National Guard Armory, 240 North Second street, San Jose, on Saturday and Sunday, April 19 and 20. Admission will be free and there will be nothing for sale. This progressive group, organized by Russell S. Grube, its president, and a charter member of the Los Angeles Lapidary society, is now two years old and has more than 70 members. Last January, when it was but a year old, it gave the first public showing of its work. More than 9000 items were displayed to more than 3000 visitors. This was a phenomenal attendance considering the population of the area. This year they anticipate at least 5000 visitors and their exhibits are being arranged so that a large attendance can view the gems without crowding. If you have been reading about rocks and gems but doing nothing about it why not stimulate your passive interest by visiting this wonderful exhibit?

The gem cutters of Southern California will have their treat when the California Federation of Mineralogical societies holds its convention at the museum in Santa Barbara on Friday, Saturday and Sunday, May 23, 24 and 25. How the mineral collector and the gem cutter have come together in the past several years is best indicated by noting that of 17 classifications eligible for prizes, 6 of them, or more than a third, are for lapidary divisions. The commercial exhibits will no doubt, as usual, be dominated by the gem material booths and lapidary machinery displays. This will be a great convention and show and every lapidary should attend. While it is a convention of mineral societies all persons who are not members of such a society will be welcome we feel sure.

The federation is offering prizes under classification No. 16 to a "Guest Exhibit." This is open to anyone who is not a member of any society in the federation. The exhibit may be of minerals or polished materials. Here is a chance for some lapidary who belongs to no mineral society to take a prize and we anticipate that there will be some fine lapidary exhibits in Class 16. If you intend to place an exhibit you should communicate with Dr. C. D. Woodhouse, 33 Mimosa Lane, Santa Barbara, who is general chairman.

A short while ago I was introduced to a doctor from Michigan. It happened that he was a gem cutter and a subscriber to *Desert Magazine* and he paid little attention to the introduction except to note that I was interested in gem cutting. In the course of our conversation he asked me if I read the *Desert Magazine* and I could not resist the temptation to lead him on a little. I replied that I did read it and asked him if he read the Amateur Gem Cutter page.

"Oh," he replied, "my wife and I always read that page first. We have gotten a lot out of it. However, I think the old fellow who writes it must be running out of ideas. He has been writing about how to organize lapidary

societies and a lot of other stuff but he hasn't had much about gem cutting lately. I suppose there's a limit to what one can say about polishing a rock after all."

My broad smile must have stirred something in his subconscious because it suddenly dawned on him that I could be THE Quick who wrote the page and after confirming that fact we had a good laugh together. But the doctor was right and I am going to offer two good ideas immediately that are of value. They were contributed by William T. Baxter of Bethesda, Md., well known to all lapidaries for his book *Jewelry, Gem Cutting and Metalcraft*.

Mr. Baxter writes: "Ever try polishing tiger-eye on a leather lap with chrome oxide (jade polishing powder)? I tried it and got such a polish it looked like a mirror. I was using a piece of sheep skin mounted over sponge rubber on a 4" buff I made especially for jade polishing. I thought I'd try a piece of tiger-eye on it which I had just finished on a felt buff. My, HOW it improved it!"

He also gave me another good idea as follows. "Cut a piece of tiger-eye so it shows concentric rings. Slice the material parallel to the bands. Cut around the blank and make a high cabochon. This makes an unusually interesting stone."

It is true that the special field of *Desert Magazine* limits the development of lapidary technique and the offering of field trips, etc., outside of the sphere of the desert. That is why Harry Ringwald and myself have established *The Lapidary Journal* which should be going into the mails about the time you receive this issue. I want to take this opportunity to thank the many readers who have demonstrated such faith in the venture that they sent in their subscriptions months before the first issue appeared. We always will regard every new subscription with interest in the years to come, but the names of those who subscribed without seeing will be indelibly impressed on our memories. At this writing there are several hundred subscriptions directly traceable to readers of this page. They came from the list of the names of *Desert Magazine* correspondents we circularized. We could identify many more because last month's issue gave the wrong address of our publication. We therefore knew all the subscriptions with that address came directly from readers.

The Lapidary Journal (a quarterly the first year) will make its bow on April 1st. The subscription price of the first four issues will be \$1.00. If you wish to subscribe you can do so easily by placing a dollar bill in an envelope. Enclose your printed name and address on a slip of paper and send it to *The Lapidary Journal*, P. O. Box 1228, Hollywood 28, California. Or it will be on sale at your favorite gem dealer's shop at 35c a copy.

The membership list of the Orange Belt Mineralogical society contains this beautiful thought on its cover—

"From altars and idols to churches and shrines, through witch stones and mad stones, birth, blarney and betrothal stones; from creation to grave, we live with our rocks." These words were written by Paul Walker of Beaumont, California, editor of *Trade Winds*.

GEMS AND MINERALS

ARTHUR L. EATON, Editor

DESERT SOCIETY HOLDS ANNUAL SHOW, TRIP

Desert Gem and Mineral society, Blythe, California, held its second successful gem and mineral show and field trip February 7-9. In addition to local enthusiasts who exhibited, over a dozen guests and dealers filled tables with varied and beautiful specimens. Prizes were given only to guest exhibitors. First award went to Edward Redenbach of Searles Lake mineral society, widely diversified specimens, all polished; second to Lee Seabridge, Norwalk, California, polished petrified woods; third to Thomas Rogers, San Jose, California, sagenite, cabochons, flats, pebbles; honorable mention to Mrs. H. D. Clark, Redlands, iris agate, and to Bert A. Rhoads, Lander, Wyoming, jade. Dealers supplied specimens for raffle.

A caravan of 68 autos went on Sunday's trip to Hauser geode beds about 42 miles southwest of Blythe. No one left the diggings empty handed. Weather was ideal.

NORTHWEST CONVENTION PLANS PROGRESSING

Plans for seventh annual convention of Northwest Federation of Mineralogical societies, to be held August 30-31 in Seattle, are shaping up under leadership of G. I. Canfield, convention chairman. Reports from member societies indicate that all are planning to participate actively.

Display committee, under Mrs. R. C. Goodman, display coordinator, 1318 W. 80th street, Seattle 7, Washington, is making a preliminary survey of amount of exhibit space needed. Convention will be held in Masonic temple, Harvard and East Pine, and display rooms will be open from 8:00 a. m. to 5:30 p. m. on Saturday and from 9:00 a. m. to 4:00 p. m. Sunday. Paul H. Soll, chairman of the Map committee is listing a number of locations in the area for possible field trips.

COACHELLANS FORM MINERAL CLUB

Coachella Valley Mineral society was formally organized on February 13. Constitution was ratified and following officers elected: Glenn Vargas, P. O. Box 784, Indio, California, president; Dedrick F. Wilson, vice-president; Gladys Butterfield, secretary-treasurer, Dorothy Faulhaber, assistant secretary-treasurer; Omar Kerschner, field trip chairman. Club was organized through efforts of Mrs. Jane Walker, Indio librarian. Fifty members have already joined society, which meets second Thursday of each month at Coachella Valley Water district auditorium. March field trip has been scheduled to the Ogilby, California, area.

Mother Lode Mineral society, Modesto, California, reports the following officers: W. Smith, president; A. J. McMeeken, vice-president; Lois Wemyss, 1310 Tuolumne boulevard, secretary-treasurer; Ira Mariott, Fayne Rhinehart, trustees.

SEARLES CLUB WILL MAKE DEATH VALLEY TREK

Plans are being completed for annual Death Valley trek of Searles Lake Gem and Mineral society on March 29-30. A get-together dinner in collaboration with Desert Lions club of Randsburg will be held on March 28. Trip will include visits to Shoshone, Beatty, Stove Pipe Wells, Furnace Creek inn and Wildrose station.

The Trona group has been chosen to sponsor the mineral exhibit, including all commercial exhibits and a fluorescent display, at San Bernardino County Orange show, March 10-15. Vice-President Eddie Redenbach will be in charge of gathering and arranging display.

Redwood Empire Gem and Mineral society, (formerly called Sonoma County Mineral society) 1620 Sebastopol Road, Santa Rosa, California, has elected following officers for 1947: Bill Nisson, president; Art Ellis, vice-president; Clara Taft, 2650 South Dutton avenue, Santa Rosa, California, secretary-treasurer. Visitors are welcome at meetings held second Wednesdays. Club visited Vonson collection in Petaluma January 2. On January field trip members collected glaucophane, muscovite, pyrite, garnets, hornblende, omphacite, actinolite, calcite. These minerals formed topic of quiz at February meeting.

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THE DESERT MAGAZINE

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TIGER EYE, slabs at 35c sq. in. Bulk—\$3.50 lb. and if you slab it at proper angle you may return slabs not wanted for \$1.50 lb. refund. E. R. Hickey, 2323 $\frac{1}{2}$ So. Hope, Los Angeles.

WANTED IMMEDIATELY: 50 colorful mineral rocks, dimensions 6 to 12 inches suitable outdoor rock facing. Interested soon wholesale connections minerals, rocks, shells, novelties, etc. Right now in hurry for colorful rocks to incorporate in display building. Want variety. Describe and price. J. D. Mahaffey, Sunrise Beach, Mo.

ARIZONA AGATE NODULES—A new find. These nodules have a very thin coating and run in colors of pastel shades, pink, purple, brown, mottled, banded, etc. Sizes from $\frac{1}{4}$ to 50 lbs. each. Quartz crystal geodes and thunder eggs mixed sizes $\frac{1}{4}$ to 20 lbs. each. Shipped prepaid for 40 cents per pound on orders of 5 pounds or more unopened. Correspondence invited. Wholesale lots. Maricopa Gem and Mineral Mart, Box One, Morristown, Arizona. Visitors welcome. Stop and see us at Bucking Horse Ranch, 9 miles south of Wickenburg on Highway 60-70-89.

STERLING SILVER neck chains 75c, Men's heavy silver cast ring blanks \$3.45, Ladies' \$2.50, Ear Wires 40c pair, Sheet silver, Bead wire, findings, etc. Hardened ground ring mandrels \$3.75. Zircons \$2.50 carat up. Amethyst 50 carat assorted sizes \$12.50. Half cultured pearls \$1.00. Fresh water pearls baroque \$1.00. Amazonite cabochons \$3.00 doz. Turquoise cabochons \$4.00 doz. Lapidary supplies, arbors, sanders, diamond saws, etc. Visit our store, or write for lists. J. J. Jewelfcraft, 915 E. Washington St., Pasadena 6, Calif.

CASSITERITE in Zinnwaldite—50c to \$1.50. Rose Celestite—50c to \$1.00. Thompson's Studio, 385 West Second Street, Pomona, California.

POLISHED SPECIMENS: 10 identified choice polished specimens — Pet. Wd., Jasp-Ag., Turritella, Agates, etc., all for only \$2.00. Stardust Gemhouse, Rt. 6, Box 1113D, Phoenix, Arizona.

SPECIAL WHILE THEY LAST—For your desk—Beautiful, highly polished, Mexican Onyx Round Base (6 in. diam. $\frac{3}{4}$ in. thick) mounted with Pen Holder to fit your pen. Limited supply—order now. \$5.50 postpaid. Elliott Gem Shop, 26 Jergins Arcade, Long Beach 2, Calif.

CHALCEDONY — Pink, yellow, and grey. Mine run \$1.00 lb., picked \$2.00. Write for list. Robert J. Halsted, 500 Parker Road, Las Cruces, New Mexico.

FIFTY MINERAL SPECIMENS, $\frac{3}{4}$ " or over, boxed, identified, described, mounted. Postpaid \$4.00. Old Prospector, A-60, Dutch Flat, Calif.

MONTANA MOSS AGATES in the rough for gem cutting \$1.00 per lb. plus postage. Also Slabbed Agate 25c per sq. in. (Minimum order \$1.00). Elliott Gem Shop, 26 Jergins Arcade, Long Beach 2, California.

ROCKY MOUNTAIN FEDERATION CONVENTION SCHEDULED

Rocky Mountain Federation of Mineral societies invites members and interested visitors to attend third annual convention June 12-13 in Salt Lake City, Utah. Headquarters will be Newhouse hotel. Because this year marks centennial of arrival of Mormons in Salt Lake valley, there will be a hundred-day celebration beginning May 1, providing many features of special interest.

Host societies plan a two day field trip, June 14-15, to Topaz mountain and will direct or guide visitors to other points of interest. Utah's two great mining camps, Utah Copper company and Park City mining district, are located in neighboring Wasatch and Oquirrh mountains.

For information write Mrs. C. W. Lockerbie, 223 West 9th South, Salt Lake City 4, Utah.

AMONG THE ROCK HUNTERS

A called meeting of Imperial Valley Gem and Mineral society to prepare for fluorescent section of the second annual exhibit, March 29-30, turned out to be a surprise shower for members Imogene Deems and Harold Flood who plan to be married in mid-March.

E. W. Newman talked on more unusual mineral deposits of Montana at February 4 meeting of Mineralogical Society of Utah, held in geology building of University of Utah. Newman was formerly bureau of mines district engineer for state of Montana. Members displayed interesting Montana minerals.

Minnesota Mineral club planned a quiz on quartz family minerals at February meeting, experts to be Charles Smart, Mrs. Wm. Cooper, Wm. Mason 3rd. Group also was to see colored motion pictures of J. P. Morgan collection of gems and Hall of Gems from Chicago museum. Annual exhibition of club is scheduled for Sunday, April 13 from 1:00 p. m. till 9:00 p. m. in east room, Curtis hotel, Minneapolis. Meeting April 12 will be to enter exhibits, arrange for space and answer last minute questions.

Chicago Rocks and Minerals society recently observed its first anniversary. It already has a monthly bulletin—the Pick and Dop Stick—and plans to set up its own lapidary shop.

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5 larger—average $\frac{3}{4}$ "-1"	1.00
6 still larger—1"-2" or over	2.00
1 small vial clear fire opal	1.50
50 rough mixed Mexican Opals, including honey, cherry, etc., average 1"	1.50
ALL 5 LOTS POSTPAID—\$6.00	

Although these are sold chiefly as cabinet specimens and have plenty of fire, many of them will work up into nice cabochons.

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42 Non-Metallic Minerals	2.75
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126 Specimens—Complete Set	8.00

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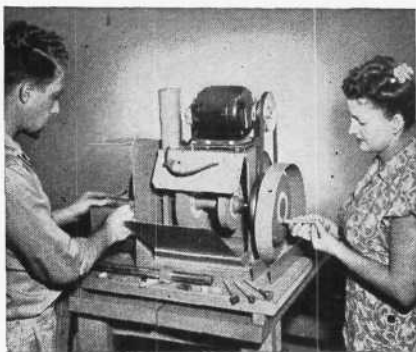
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1143 Post Ave. Torrance, Calif.

Imperial Valley Gem and Mineral society changed date of first March meeting from 6 to 8 in order to hear talks by Mr. and Mrs. Frank Estabrook of Seattle, who were in El Centro on that date. They showed many colored slides of scenery and minerals. The Estabrooks were accompanied by Mrs. Alice Reed of Seattle and Mr. and Mrs. John Greb of Palm Springs. All were charter members of Gem Collectors' club of Seattle.

W. T. Harriman was scheduled to talk on gold mining at February meeting of Long Beach Mineralogical society.

Mineralogical Society of Arizona is interested in monthly discussions by Chas A. Diehl and Ben Humphreys on what the rockhound wants to know. Robert B. Bale was slated to speak at February 21 meeting on travels of a non-collecting rockhound. February field trip was to Castle Dome mine and mill near Superior.

Richard Macombs was speaker at February gathering of Kern County Mineral society, Bakersfield, California. January field trip was to vicinity of Blackwell's corner for jasper and septaria.

Sequoia Mineral society installed officers at annual banquet February 7: Mrs. A. E. Chapin, president; Forest Minch, vice-president; Mrs. Leon Dial, Dinuba, California, secretary; Mabel Andersen, treasurer; Wheeler Bryant, Pearl Elter, Mrs. Wm. Wedel, David Orr, directors; Sam Carlson, federation director. Members staged an exhibit stressing fluorescent material. Elmer Eldridge gave a brief history of the group. Neva Joan Eisenbise entertained with piano selections.

Second annual exhibit sponsored by Imperial Valley Gem and Mineral society and Imperial Valley Lapidary guild March 29-30 in El Centro, California, will be field trip goal of several western rock clubs.

Texas Mineral society of Dallas reports recent programs. Dr. Arthur Richards talked on Cold Springs, Nevada, mining area, showing colored slides of district; Dr. Ellis W. Shular reviewed his book *Rocks and Rivers of America*; Chester A. Howard gave a program on meteors and meteorites, displaying his collection of meteorites; J. Lewis Renton of Portland, Oregon, showed color slides of agates and minerals.

Snohomish County Mineral society, Everett, Washington, has chosen the following officers: Wm. G. De Feyter, president; Earl Williams, vice-president; Harry E. Bonner, past president; Joe Swartz, secretary-treasurer. Club has a membership of 94 with average attendance of around 70. Through Everett junior college, group has sponsored classes in mineral identification, in lapidary work and in jewelry making. Meetings are held second Mondays. Pebbles, society bulletin for January, contains news and information, program and menu for banquet, a bit of club history, articles, quips and cartoons.

Mineralogical Society of Southern California, Pasadena, scheduled two sound films for February meeting: *Evolution of the Oil Industry*, and *Tin from Bolivia*. Members were urged to display all possible minerals belonging to the tin species from any tin producing locality.

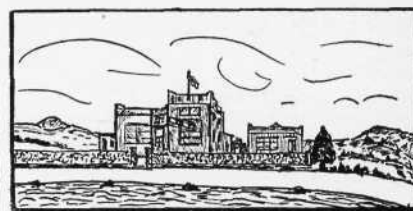
Naval Ordnance Test Station rockhounds have planned a one-day field trip to the Trona Pinnacles for Saturday, April 12, and invited Searles Lake Gem and Mineral society to accompany them. Previous field trip was to Calico mountains.

Langdon H. Longwell, chairman Marquette Geologists association, Chicago, took charge of February program, showing his kodachrome slides of Michigan copper country. Dr. Williams of Chicago Academy of Sciences has been granted permission to publish articles on pebbles by Wm. E. Menzel which have been appearing in the Marquette bulletin.

Mrs. Sally Patton, secretary Imperial Valley Gem and Mineral society, who has been in San Francisco awaiting arrival of a grandchild, made a weekend journey to her desert home for a field trip and some sunshine. Sharon Ann arrived while grandma was a-rocking.

Tucson Gem and Mineral society, organized last December, has a membership of 50. First field trips took group to Silver Bell region and to Vail. Latter trip was guided by Mr. Gastelum and banded agate discovered was called gastelum blue in his honor. Anyone interested in attending meetings should communicate with Mrs. Margaret O. Gastelum, 1701 So. 6th avenue, Tucson, Arizona.

G. Haven Bishop was speaker at February 14 dinner meeting of Pacific Mineral society, Los Angeles. He showed kodachrome slides to illustrate a rockhound's views of Guatemala and our western parks. For display each member showed a specimen collected on some past field trip, labeled as to name, place and date. Following officers were installed: O. C. Smith, president; J. F. Underwood, first vice-president; Harold Eales, second vice-president; N. L. Martin, secretary-treasurer; N. W. Currie, E. B. Bingham, directors. On February field trip, group met at summit of Cajon pass, hoping to find piedmontite, rhodonite, actinolite, etc.



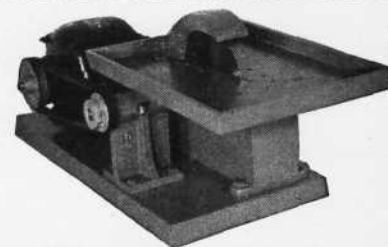
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Moulton B. Smith spoke on various formations of chalcedony at February meeting of Yavapai Gem and Mineral society of Prescott, Arizona. Talk was illustrated with a collection of chalcedony roses and nodules. Members and guests made a field trip to a nodule and fossil location on the Perkinsville road. Some fossils were of crinoid type, some resembled oysters. There were 10 cars and 43 persons in caravan.

Mineralogical Society of Southern Nevada voted, at February 18 meeting, to hold two meetings and one field trip each month. Program committee was formed, including Mrs. I. P. MacDonald, A. G. Boynton and D. McMillan. They plan to engage speakers on mineralogical subjects and also to hold lessons in cutting and polishing. At an earlier meeting, Mrs. E. L. Sapp, J. Weston and Robert McNeil were appointed to field trip committee.

M. J. Bachrach, Burlingame, who has been doing experimentation with plastics, was speaker at February 19 meeting of Northern California Mineral society, San Francisco. Arthur Maudens of San Mateo displayed beautiful polished stones. February 16 field trip convened at Coyote, ten miles south of San Jose. L. P. Bolander, leader.

San Fernando Valley Mineral and Gem society has increased so in membership that larger meeting place had to be found. Tentatively it is Sepulveda Women's club, Columbus and Parthenia, Sepulveda village. Special Valentine's day program was planned for February 13 meeting. George M. Parker, principal speaker. Club has adopted official emblem and is considering having decals made. Lapidary and mineralogy classes are well attended. Treasurer reports nearly \$500 on hand.

East Bay Mineral society, Oakland, California, had a busy schedule arranged for March: March 6—Sound movie presented by George E. Duff of Standard Oil company. March 20—Potluck dinner, buffet style. Kodachrome pictures of Utah desert and lecture by H. W. Hansen. Display of cut and polished material by John Raine of Walnut creek. Club meets in Lincoln school, 11th and Jackson, Oakland. Visitors welcome.

Members of Imperial Valley Gem and Mineral society and others continue to report discovery of yttrantalite in the Ogilby region. Some are mere fragments; some are chips; but others are small perfect cubes. An occasional specimen even shows multiple twinning of cubes. Color and luster of yttrantalite are different from the color and luster of iron specimens of the region. Luster is submetallic to greasy; color very black. Even small specimens are distinctly heavy. Yttrantalite is one of the radio active uranium series.

COUNTY MAPS . . .

CALIF: Twnshp, Rng, Sect, MINES, All road, trail, creek, river, lake, R.R., school, camp, rng. station, elev., ntl. forest, land grant, pwr. line, canal, etc., boundaries.

Size range 20x30 to 73x100 inches.
All Counties \$1 except as listed: Tuolumne, Santa Barbara, Plumas, Placer, Modoc, Madera, \$1.50; Tulare, Tehama, Siskiyou, Imperial, \$2; San Diego, Riverside, Mendocino, Kern, Humboldt, Fresno, \$2.50; Trinity, Shasta, Mono, San Luis Obispo, Monterey, Lassen, Los Angeles, \$3.

Inyo Co., 67x92 \$15.00
San Bernardino, 73x110 15.00
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Also Oregon, Idaho and Washington County Maps.

WORLD'S MINERALS

2417 San Pablo Ave. Oakland 12, Calif.

H. L. Monlux, member Los Angeles Lapidary society, entertained Santa Monica Gemological society at February meeting with a screen showing of his collection of 150 transparencies of Southern California minerals. January field trip was to seismotite deposit and petrified forest in Last Chance canyon. February field trip was planned to Calico mountains.

Auction of donated specimens was main feature of February meeting of Pomona Valley Mineral club held in chemistry building of Pomona college, Claremont, California. Auctioneer Hollis Page raised a satisfactory contribution to the club treasury. Birthstone of the month—amethyst—was discussed by Esther Leggee.

J. E. Gilkey writes that Oklahoma Mineral and Gem society, Oklahoma City, is now a member of Midwest federation. In seven months, membership has increased from 17 charter members to 40 zealous rockhounds. Society insignia is a quartz crystal group enclosed in outline of the state of Oklahoma.

San Jose Lapidary society announces its second annual gem show to be held April 19-20 in National Guard armory, 40 No. 2nd street. Exhibit will be open Saturday, 10 a. m.-9 p. m. and Sunday, 9 a. m.-7 p. m. Admission free. Over 8000 pieces of work done by members will be on display and prizes will be awarded in most divisions. Secretary of organization is Chas. Murphy, 349 Page street, San Jose, California.

E. R. Hickey, Sr., has a display of mineral specimens, which is drawing attention of many people, at the branch of Los Angeles public library located at 3420 S. Hoover street, near University of Southern California.

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Number two choice gem agate or petrified wood—\$5.00 per pound.

Number one choice gem picture petrified wood—\$10.00 per pound.

Number one choice gem Arizona agate or jasper—\$8.00 per pound.

3/16 slices of mixed Arizona agate, jasper, and petrified wood—\$15.00 per pound; 2 pounds for \$27.00.

Choice sliced gem—\$35.00 per pound.

Beautiful rainbow, high color and candy wood—\$2.00 per pound; choice chunks \$3.00 per pound.

Specimen petrified wood in many beautiful colors. 10 pound lots at 75c per pound; 100 pound lots at 65c per pound. This wood is exceptionally nice for rock gardens, fish ponds, etc.

Send the amount you wish to spend and tell us what you want—Arizona agates, jaspers or petrified wood and the colors, pictures and so on. We will slice or chunk to order.

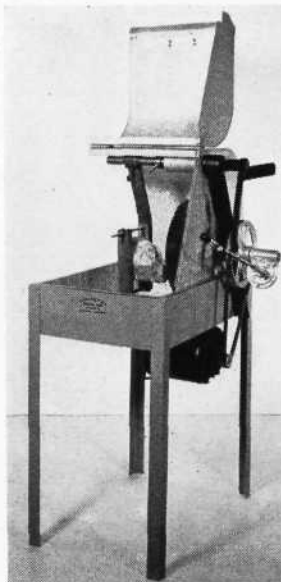
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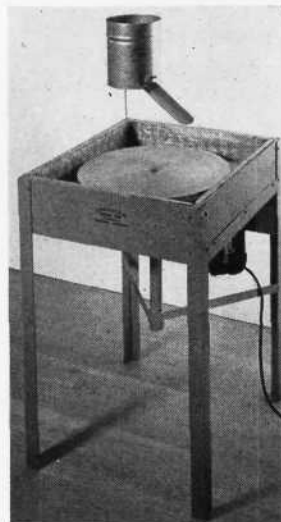


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 50 RING STONES, including genuine and synthetic\$7.50
 SYNTHETIC RUBIES or GENUINE GARNETS, per carat\$1.25
 CAMEOS or OPALS—Genuine—12 for \$3.75
 100 JEWELRY STONES removed from rings, etc., \$2.40; 50 large ones\$2.40
 12 ARTICLES ANTIQUE JEWELRY, rings, pins, etc.\$3.00
 500 COSTUME JEWELRY STONES\$2.00
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SLABS—

- 1—10 sq. in. ass't'd of all 3 materials.
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- 3—8 assorted blanks (ring-size) of all 3 materials.
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 50 Minerals

WORLD'S MINERALS

2417 San Pablo Oakland 12, Calif.

Zircons, formerly thought to be among the rarest of stones, are now known to be very common. They occur in great numbers as a non-essential part of gneiss and granite in many parts of the Southwest. Most of the crystals are microscopic and thus escape notice of general public. When examined, they prove to be quite perfect tetragonal crystals. They are often elongated cubes with low, four sided pyramids.

William P. Shea, of C. Tennant Sons and company, estimates that, at present rate of production, world's copper reserves will last only 36 years, reserves of lead will last only 24 years, and zinc 30 years. He estimates reserves of same metals in the United States are due to last an even shorter period.

Some dealers and most private collectors make the same error in sending out mineral specimens, either for sale or trade. They send them without sufficient labels. The label should always show: exact name of the mineral, element or elements illustrated, exact place of origin (name of mine if possible), and date found. Also, in case of pegmatites, or specimens which show several minerals, the color and identification of each.

U. S. bureau of mines has developed a process which promises to make the hitherto rare metal titanium fairly plentiful. Until recently the only pure metallic titanium in the world was the small amount which had been developed in laboratories for experimental uses. Pilot plant of bureau of mines is now making more than 100 pounds of the metal per week by new process.

Diopside is one of the beautiful gem stones which has had very little attention recently. It is a pale green, transparent variety of pyroxene, much resembling green tourmaline. Its hardness of six allows it to be brilliant or facet cut. It is calcium magnesium silicate.

Ocotillo mesa, 20 miles north of Yuma on the Quartzsite road, at one time was sprinkled thickly with petrified ironwood. The wood, in sections ranging from a few inches to several feet, was scattered over several square miles. In 20 years since its discovery, practically all the wood has been taken away by dealers and collectors. Only a few desert rats thoroughly familiar with the district know where to find specimens in out of the way places.

Kingman office of the Bureau of Reclamation has moved to government camp at Davis dam. Mailing office will remain at Kingman.

Term "rubellite" was formerly applied only to deep red variety of tourmaline. This variety always has been quite rare and valuable. It occasionally is found in California and Brazil. At present time term is applied by dealers and others to any kind of pink tourmaline.

Vendors in central Mexico have been selling opaque, steely colored cabochon cut stones which they call *acerinas*. They deny that these stones are hematite or any other metallic ore. When asked what the stones really are, answer is always: "They are *acerinas*." Careful chemical tests reveal that *acerinas* are cut from at least two minerals, hematite and manganese dioxide, variety psilomelane. Spanish dictionary also reveals that *acerina* means something of steel or iron.

Among the interesting specimens which have come in during the past month was one from Philip Griffin of Los Angeles, former member of Imperial Valley Gem and Mineral society. It is a section of green chlorite, with perfect octahedrons of magnetite as inclusions.

Petrified Forest was visited during 1946 by 284,979 persons in 95,139 cars, an all-time record. Increase over 1945 travel year was 346 per cent. California led in number of visitors.

Many collectors have missed or neglected one unusual mineral which would add a real touch of color to any collection. This is cobalt bloom or erythrite, hydrous arsenate of cobalt. It is a brilliant, peach colored mineral, often associated with emerald green nickel ore, garnierite. The combination is fully as striking and colorful as that of orpiment with realgar, or azurite with malachite.

M. N. Crawford, Tombstone, Arizona, has a rare picture turquoise found near Gleeson. The oval stone, about 1 3/4 x 1 inch, depicts a lone wolf atop a rocky crag.

Sequoia Mineral society was organized December 1, 1936. Eleven of the original 26 charter members are still on the roll. Plans are under way for annual banquet and installation of officers.

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Randall Henderson of *Desert Magazine* told February 19 meeting of Imperial Valley Gem and Mineral society about amusing and 64-dollar questions that come to an editor's desk. Door prizes went to Mrs. Sam Robinson and to Chuck Holtzer. Show committee held a short session after regular meeting, discussing plans and reporting progress. The exhibit March 29-30 will attract rockhounds from many points.

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Cogitations . . .

Of a Rockhound

By LOUISE EATON

Rockhounds shure injoys investigatin, hammerin an chippin, but they likes to acquire good specimens, too. After makin menny field trips they discovers that therz lots uv mountins in the desert that aren't mutch use to um xcept for landscape or to take exercise on.

• • •

Sum fokes mixes busyness with pleasur at timz, but rockhounds goes um wun better an mixes pleasure with pleasure: When rockhounds goes on vacation trips they plans to include all possible dealers an collectors in their itinerary evun if they has to travel a few hundred miles xtra on rough roads to visit um.

• • •

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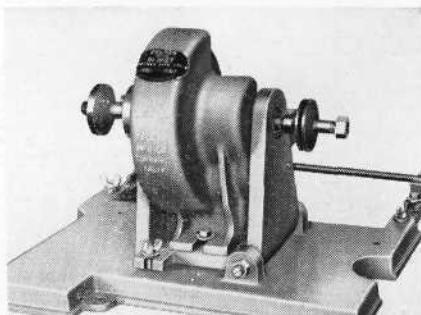
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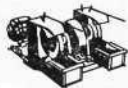


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By RANDALL HENDERSON

RECENTLY the newspapers gave wide publicity to the arrival of Victoria, Rudyard and Rider South in San Diego with their mother for their first haircuts. The event was headlined as "the first step on the road back to civilization."

As most Desert Magazine readers know, the South children, aged six, eight, and twelve respectively, have spent their lives on desert Ghost mountain where their parents, Marshal and Tanya South, have for 14 years been carrying on an experiment in primitive living.

The reporter who used the word "civilization" in this story is guilty of a common error. We have become badly confused in our use of the term. Properly, civilization is "a state of social culture characterized by relative progress in the arts, science and statecraft."

The word has nothing to do with haircuts. If it did, your ancestors and mine, the sturdy men and women who transformed the North American wilderness into the most productive region on earth were quite uncivilized. Many of them never saw the inside of a barbershop.

But I am not expressing these views merely to quibble over the use of words. Civilization is a term used to symbolize one of the most important concepts in the universe of human relations. In an age when the white people, the so-called civilized races, seem intent on exterminating each other, while the black tribesmen who live south of the equator continue to dwell together in comparative peace, it would seem that we should re-examine our concept of "civilization" to see if some phoney notions have not crept into our definition of the term.

Accepting the valuation which a newspaper reporter gave to the words, it would appear that children who lived on a remote mountain top, never had their hair cut, and had been taught all their lives not to destroy any living thing—not even the juniper trees that grew near their home—are uncivilized.

And since these children have now left their mountain home, have had their hair trimmed, and are to take up life and seek to readjust themselves to a community where hundreds of people meet death every year in auto accidents and thousands more are crippled—are we to understand that they are about to become civilized?

No, I do not know the answer to that one, but I think it is important that we Americans, and especially those responsible for the education of our children, should be trying very hard to find the answer. Atomic bombs are dangerous playthings for people who imagine that the manner of wearing the hair has anything to do with civilization.

* * *

Old-timers on the desert—the real desert rats—shun Palm Springs as they would a plague. "Too much Hollywood" is the

mildest of the epithets they use in referring to the bizarre desert resort. They dislike Palm Springs and Hollywood for the same reason they scorn pretense and ballyhoo in human relations always and everywhere.

While I share the general distaste for the sophistication of Palm Springs, I am in complete accord with one aspect of the community—its utter disregard for custom and convention.

We are all more or less slaves to conventions that have nothing to do with intelligence or character—nor the thing called civilization to the extent that the word implies cultural progress. We do not like many of these conventions, but few folks have the courage to break away from them—until they go to Palm Springs. Somehow, over a period of years Palm Springs has acquired a unique tradition in which it is the accepted thing to be unconventional.

The folks who go there are not particularly interested in the desert. Half of its visitors go there to break away from the despot of conformity and custom who decrees that we shall follow certain modes of personal exterior decoration, and rules of conduct which often have nothing to do either with morals or common sense. The other half goes there to gawk at the strange costumes and antics of those who have for the moment discarded the proprieties of custom.

The only part the desert plays in all this is that it provides a mild climate in which clothes are not essential to comfort.

What is true of Palm Springs is to a lesser degree characteristic of the desert country as a whole. In the desert, folks generally enjoy greater personal freedom than elsewhere—and may it never be otherwise.

* * *

A news dispatch brings the information that the price of cocoa beans has advanced since October 2 from 8.99 cents a pound to 25.5 cents. To most people those figures merely mean that breakfast cocoa and chocolate bars will be costing more before long.

To me that brief news item recalls the war-time days spent in the African Gold Coast where the houseboys in my barracks were cocoa farmers who had taken jobs in the army camp because there were no ships to transport their cocoa beans to overseas markets. Each of them had a little patch of cocoa trees growing somewhere out in a clearing in the jungle.

I would gladly pay more for my chocolate if I could feel the extra money was going into schools and hospitals for those black farmers of the African jungle. For despite their primitive way of life, I found in those backward people the same qualities of industry, loyalty, charity and good humor which we prize as virtues in our own culture.



DRAMA FROM THE DESERT OF SONORA

The Mexican state lying immediately south of our State of Arizona and, like it, an arid desert country with only occasional oases of watered fertility and community life, is the setting for John Hilton's *SONORA SKETCH BOOK*.

During many trips into the Sonora desert as artist and semi-professional naturalist, Hilton acquired a great affection for the Mexican people. The *SKETCH BOOK* is a collection of stories and anecdotes of these people, told in crayons and in accompanying text.

The book makes no lofty pretensions. In the author's words: "This is not a book on Mexico nor even an exhaustive study of Sonora. Rather it is an experiment in sharing the author's memories and rough memorandum sketches of his various visits into that part of the country."

John Hilton is a romantic. In the simple lives of the Sonorans he found drama that the tourist or the less sympathetic visitor would never discover. He gives intimate glimpses into the lives of these primitive and very hospitable people—the art in making tortillas, the social aspects of carrying water, hill country maternity, the bookseller who could not read, the customs and rituals and legends of folks who are very poor in worldly goods but proud and happy in their way of life.

In justice to John Hilton the artist, it should be stated that the crayon sketches are "roughs" done hastily and often under adverse conditions. One who has seen the beautiful oil canvasses which hang in the author's desert studio near Thermal, California, would wish John had taken a little more care with his crayon drawings, or that the publishers had edited them more closely, for they do not carry the dramatic interest that does the text of the book.

Nevertheless, this is a book that lives very close to the lives of the desert people of Mexico—a book which will be absorbing reading for those who find human nature a fascinating study.

The Macmillan Company, New York. 334 pp. Publication date March 25, 1947. \$5.00.

ED AINSWORTH REVIEWS CALIFORNIA HISTORY

No matter what happened during the turbulent, formative years of California's history, or where it happened, Shane Malone was either on the scene or he received

first hand accounts from those who witnessed the event. Shane Malone is the newspaperman-soldier hero of Ed Ainsworth's voluminous novel *EAGLES FLY WEST*, a personalized history of the years 1846-1850. It offers an easy method of absorbing history, and the publication, at the beginning of the golden state's centennial celebrations, is most timely.

The amount of research which Ainsworth has done is almost incredible. The familiar American names of the period are all there: Sam Brannan, Sloat, Colton, Stockton, Fremont, Kearney, Larkin, Kit Carson and the others. We see the battle of San Pasqual in vivid detail, and the taking of San Diego, Los Angeles, Monterey, San Francisco. We learn the story of the gold rush days, the constitutional convention, the vigilantes. And in addition to the main outline, there are a thousand minor happenings and personages recovered from the dusty files of newspapers and from rare and obscure pamphlets and books.

Shane Malone had always dreamed of going to California, and when he caught a glimpse of Alicia Palomares sailing for the west coast, he knew that he must follow and find her. He had been a writer on James Gordon Bennett's *Herald*, but he quit that job to join Stevenson's New York Volunteers in the Mexican war. He went to California, but everything in the world seemed to conspire against the romance between Shane and Alicia before they finally found happiness on a rancho near Pala.

With all the array of fact presented, it is not surprising that the story of Shane and Alicia becomes simply a thread upon which to string the beads of history. When it becomes a question of story or history, Ainsworth leans toward history.

Perhaps that is a result of his newspaper training. Ainsworth has been a newspaper man all his life. He is best known for his more than 20 years of service with the Los Angeles *Times*. More recently he has been co-publisher of the unorthodox and entertaining newspaper the *Desert Barnacle*, issued at Coachella, California.

Macmillan, New York, 1946. 447 pps. \$3.00.

BOOK BRIEFS . . .

Herpetologica, published at San Diego, California, is the only magazine in the world devoted exclusively to the study of reptiles and amphibians. Chapman Grant

is editor, and policy of the publication is to be understandable to the layman, while still remaining in the field of the scientist. It is the organ of the Herpetologists League, an associate of the American Association for the Advancement of Science. Publication is issued in a number of parts at irregular intervals. Subscription is \$3 a volume, and includes membership in the league and publication privileges. Office of *Herpetologica* is at 2970 Sixth street, San Diego 3, California.

Utah author Jonreed Lauritzen will have a new book, *Song Before Sunrise*, off the press in April. Like his earlier work, *Arrows Into the Sun*, Lauritzen's latest volume will deal with the Navajo Indians and with their tribal territory along the rim of the Grand Canyon.

January issue of *Plateau*, quarterly of the Museum of Northern Arizona contains an article "What Is a Katchina?" by Harold S. Colton, museum director. Included is a check list of 235 different Hopi Katchinas. According to Dr. Colton, a Hopi Indian will tell you that a katchina is a supernatural being who is impersonated by a man wearing a mask. The Hopis believe that the katchinas live on the San Francisco peaks near Flagstaff and on other high mountains.

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This is used in the famous Valerie Jean Date Milk Shakes. Sixteen years ago we originated this drink and the first date butter was made by hand pitting the dates and mashing them into a pulp with a potato masher. We feel that we have come a long way in refining this date butter for the use of our customers. It was after two years of experimentation by Valerie Jean that the first date butter was developed that would ship successfully and KEEP INDEFINITELY.

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